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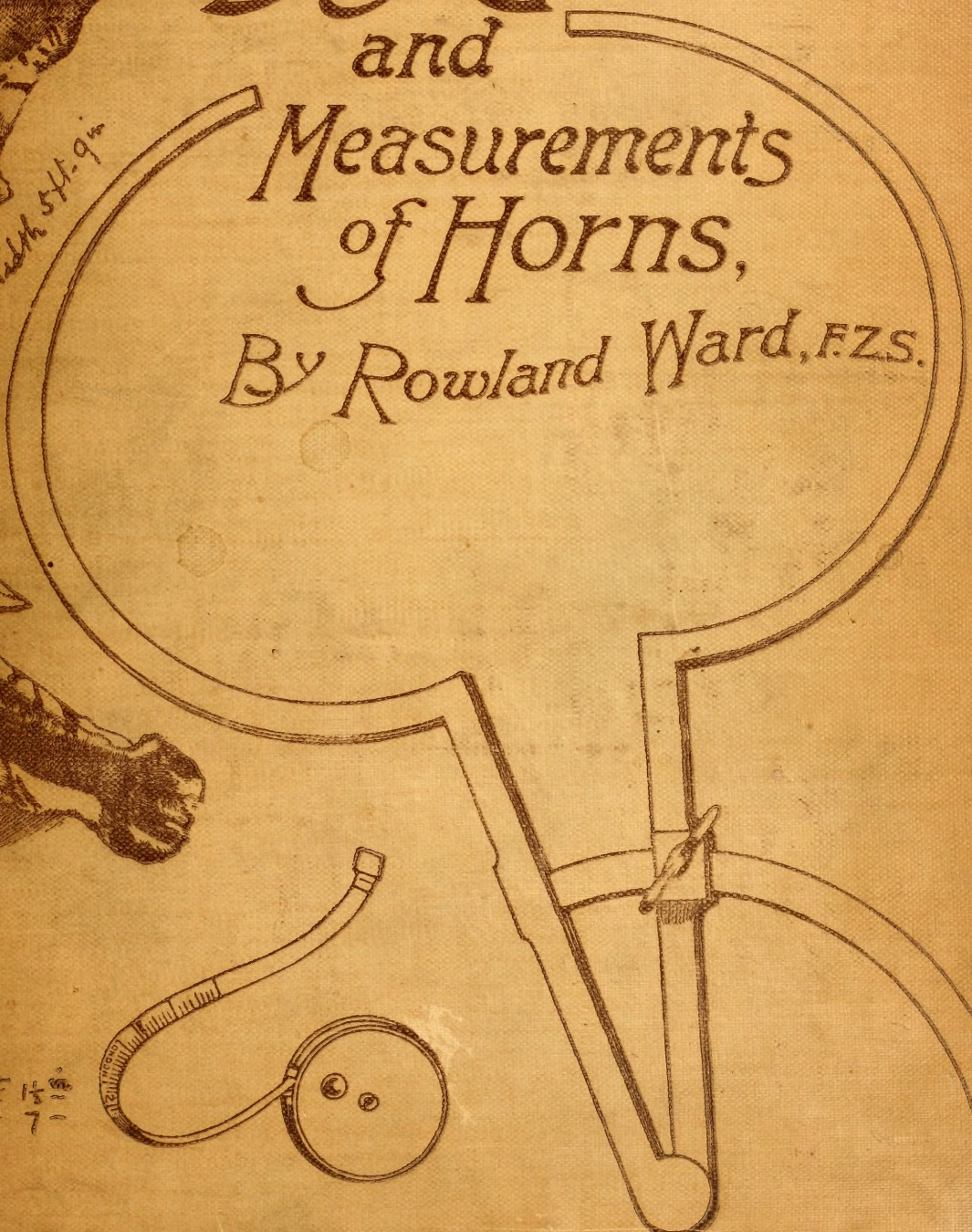
Records of Big Game and Measurements of Horns,

By Rowland Ward, F.Z.S.



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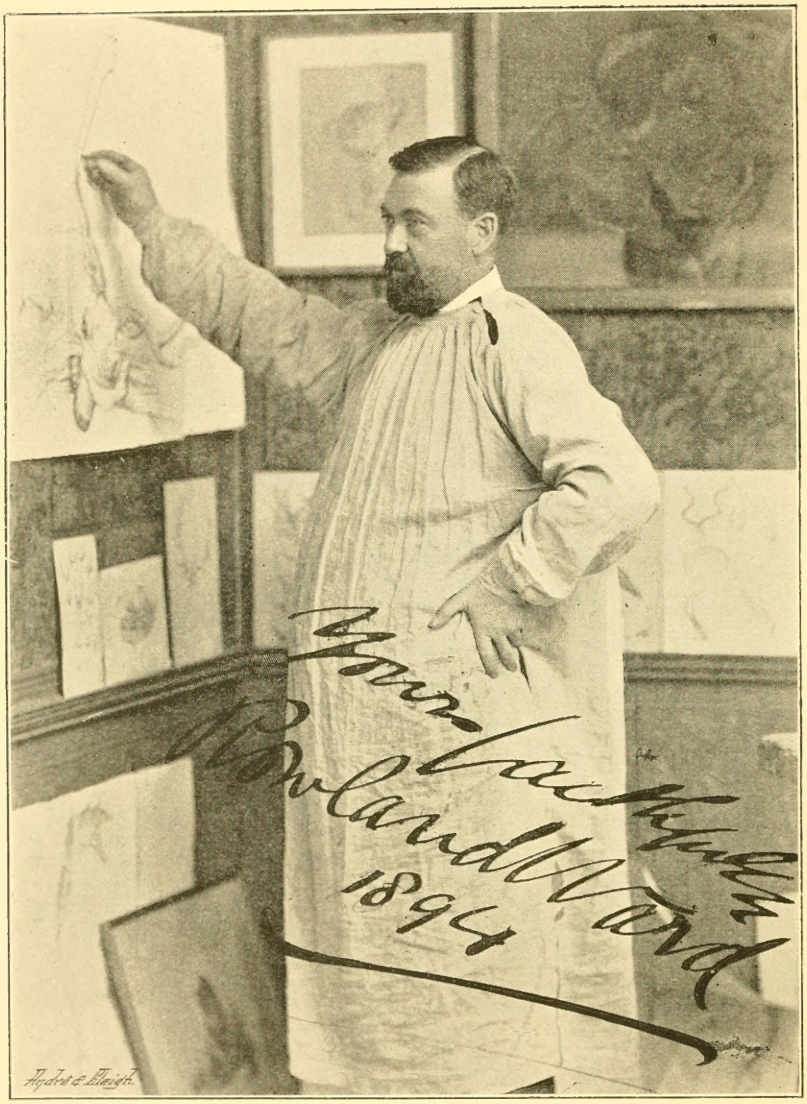
RECORDS OF BIG GAME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RECORDS OF BIG GAME

CONTAINING

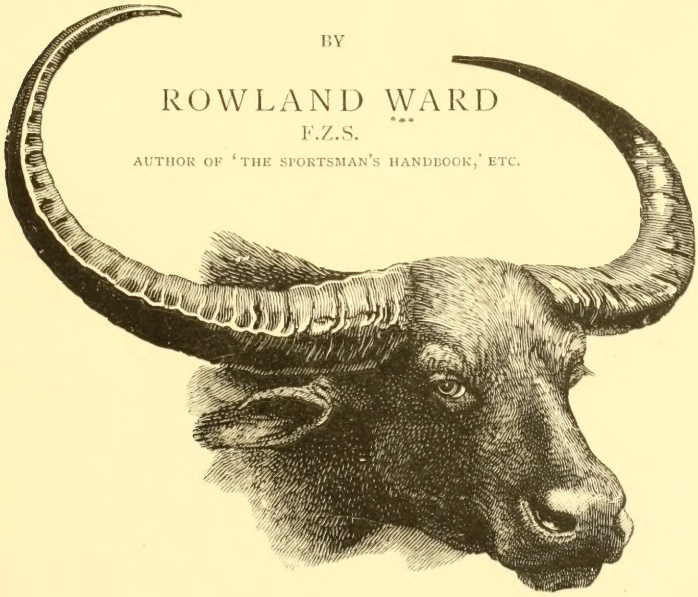
AN ACCOUNT OF THEIR DISTRIBUTION
DESCRIPTIONS OF SPECIES, LENGTHS, AND WEIGHTS

MEASUREMENTS OF HORNS

AND

FIELD NOTES

For the use of Sportsmen and Naturalists



BY

ROWLAND WARD
F.Z.S.
AUTHOR OF 'THE SPORTSMAN'S HANDBOOK,' ETC.

LONDON
ROWLAND WARD AND CO., LIMITED
"THE JUNGLE," 166 PICCADILLY, W.
1896

THIS BOOK IS DEDICATED

TO THE

SPORTSMEN OF THE WORLD

WITHOUT WHOSE DETERMINED PLUCK AND LOVE OF TRAVEL THESE RECORDS

COULD NOT HAVE BEEN PRODUCED, NOR COULD I HAVE SPENT

A LIFETIME IN THE ART WHICH I HAVE

TRIED TO ADVANCE

ROWLAND WARD

PREFACE TO SECOND EDITION

SINCE the publication of the first edition of this work under the title of "Horn Measurements," I have been successful in collecting much new and valuable data bearing upon the measurements of horns and other statistics of Big Game. For this information I am to a considerable extent indebted to numerous sportsmen, and to the curators of some of the most important museums of the world, who have been kind enough to measure all the finest specimens in the collections under their charge. In addition to this valuable help, for which I desire to express my grateful acknowledgment, I have had a record carefully prepared of all the most remarkable specimens registered, as well as those that have from time to time passed through our hands. I am indebted to Mr. H. A. Bryden for much of the descriptive matter of the South African game. There will also be found embodied with all these new records numerous illustrations of typical heads, skulls, and horns drawn especially for this new edition.

In addition to this supplementary information, the new edition will be found to contain more exact localities than have hitherto been recorded, and we continue in constant correspondence with sportsmen in almost every part of the world with a view of still further completing our records.

R. W.

PREFACE TO FIRST EDITION

My object in producing this book is to start a record of Horn Measurements of the Great Game of the World. I only regret that it was not commenced at an earlier date, as in that case it would have been more complete. In my earlier life I had but little help, and often worked thirty hours at a stretch; my work necessitated attention to specimens that demanded immediate treatment, and my love for reproducing life-like studies prevented me from keeping records.

The measurements presented here have been taken principally by one hand, and, for that reason, I value them the more. The dimensions from acknowledged authorities I naturally am not responsible for. This work is not designed to be in any way a scientific treatise, but is prepared for sportsmen and scientific men who are interested to see comparable measurements at a glance. I think these have not been produced in like form before. These records can be added to, and I shall feel indebted to sportsmen who will contribute any authentic record measurements. It must be borne in mind that many trophies which have passed through my hands are now scattered all over the world, and the dimensions of them, for the time, are

not recorded here. Some that I give now are fine measurements, some are only ordinary statistics, many are of new species altogether; these last being mainly a result of the quite recent opening up of Africa. The advice noted as to the way to measure must be dealt with strictly, for many persons measuring by different methods produce untrustworthy record. We have tried to be fair in producing the statistics, taking them rather under than over the mark; and the tape has not been pressed into corrugations of horns, but carried outside, over all inequalities.

R. W.

ABBREVIATIONS AND SIGNS.

— Owner's measurements or other known authority.

♂ Male. ♀ Female. ... Unrecorded.

R, Right horn. L, Left horn.

MEASUREMENTS are on the outside of horn from tip to base; with Deer from the highest tip point to burr, except where not notified to the contrary.

Circumference is at the base; with Deer above brow tine; in the Red Deer group between bez and trez.

LENGTH is expressed in inches, where not otherwise noted.

WEIGHTS taken on the field should be accepted as approximate, and, unless mentioned, are of adult males.

HEIGHTS are in most cases taken at the shoulder of adult males.

P.Z.S., Proceedings of the Zoological Society.

MEMO.—Horns that possess a core have a tendency to shrink, and consequently measurements on the field are often misleading.

TYPE SPECIMENS are those from which the species are described and named.

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RECORDS OF BIG GAME

THE RIB-FACED OR BARKING DEER (Cervulus muntjac).

In the Pir Panjal, "Kakrell"; N.W. Provinces, "Khakur"; Central Provinces, Muntjar; Nepaleese, Mirga.

HEIGHT at shoulder about 26 inches. WEIGHT about 38 lbs. A female stands about 23 inches, and weighs about 32 lbs.

Distribution—British India, Burma, Malay Peninsula, Java, Sumatra, Borneo, etc.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
-7½	Weight, 37 lbs. Height at shoulder, 26 in.		Near Mussooree	Major A. E. Ward.
6¾	2¼	3	Ranikhat . .	Surgeon-Major W. B. C. Deeble.
-6¾	2¾	2½	Perak . .	Perak Museum.
6⅝	2¼	3⅛	Java . .	J. C. Van-Son.

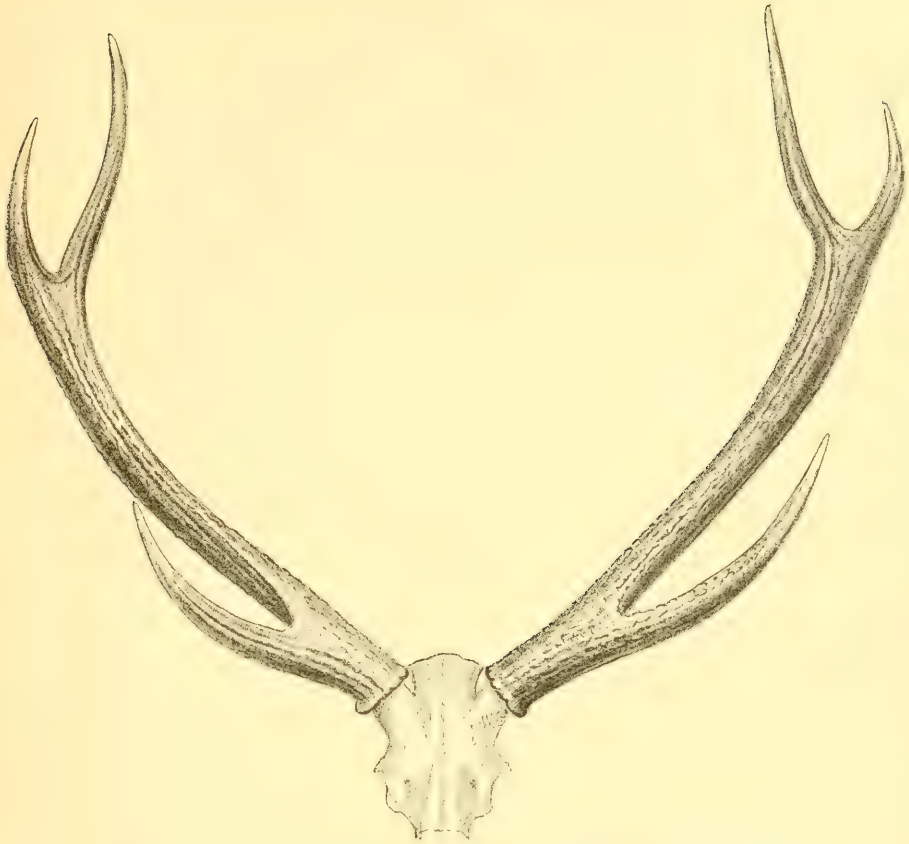
THE RIB-FACED OR BARKING DEER (Cervulus muntjac)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$6\frac{1}{2}$ *	$2\frac{5}{8}$	$3\frac{1}{2}$	Nepal . .	B. H. Hodgson, British Museum.
$6\frac{1}{2}$	3	$3\frac{3}{8}$	...	A. O. Hume, Private Collection.
$-6\frac{3}{8}$	$2\frac{3}{4}$	...	N. of Mussooree	Capt. Harry Brooke.
6	Weight, 44 lbs. Height at shoulder, 27 in.		Cent. Provinces	Major A. E. Ward.
$5\frac{3}{4}$ *	$2\frac{3}{4}$	$3\frac{1}{4}$	Nepal . .	B. H. Hodgson, British Museum.
$5\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	Assam . .	A. H. Straker.
$5\frac{3}{8}$	3	...	...	R. J. Heber-Percy.
$5\frac{3}{8}$	$2\frac{1}{4}$	$3\frac{1}{8}$	...	Hume Collection, British Museum.
$5\frac{1}{4}$	2	$3\frac{1}{8}$	S. India . .	Sir Victor Brooke's Collection. (Shot by the late Gen. Douglas Hamilton.)
$5\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{8}$	Assam . .	P. Russel.
5	3	3	Do. . .	Major C. S. Cumberland.
-5	$3\frac{1}{2}$	$3\frac{5}{8}$	North Kanara .	Lieut.-Col. L. L. Fenton.
$-4\frac{1}{2}$	$3\frac{3}{4}$	$3\frac{5}{16}$	Darjeeling .	Dr. Percy Rendall.
$4\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{5}{8}$	...	Hume Collection, British Museum.
$3\frac{1}{2}$	$1\frac{3}{4}$	2	Nepal . .	Sir Edmund G. Loder, Bart.
$-2\frac{1}{2}$ †	$1\frac{1}{2}$	$3\frac{1}{4}$	...	Dublin Museum.
$2\frac{1}{2}$ †	$1\frac{5}{8}$	3	Ningpo . .	R. Swinhoe, British Museum.
$1\frac{1}{2}$ ‡	...	$4\frac{1}{2}$	Do. . .	A. Mitchie, British Museum.

* *Muntjacus virginalis.* † *Cervulus sclateri.* ‡ *Cervulus crinifrons.*

Fea's Rib-faced Deer, *Cervulus feæ*, the only specimen, was described in 1889, and was obtained on Muleyit Mountain west of Moulmein by Mr. L. Fea. Horns about 2 inches long.

There is another variety in some part of Southern China, *Cervulus reenesi*, specimens of which are very rare.



Drawn from a specimen shot by Col. J. Evans, in the Ghauts of Simrol (see over).

SAMBUR (Cervus unicolor).

WEIGHT, 600 lbs. (about); HEIGHT at shoulder 54 inches—the late Sir Samuel Baker, Bart. One killed in Ceylon by him weighed 411 lbs. clean. HEIGHT of ♂ shot at Nimar, Central Provinces, by Lieut.-Col. Wade-Dalton, 59 inches.

Distribution—Throughout the oriental region wherever there is undulating ground or hilly country with forest, but the forms in some of the Malay Islands seem specifically distinct. It ascends the Himalayas in places to 9000 or 10,000 feet, and is common on the summits of the ranges in Southern India (W. T. Blanford).

SAMBUR (Cervus unicolor)—*continued.*

Length on outside curve.	Circumference above brow tine.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
46½	6⅜	24⅛	30⅞	3+3	...	A. O. Hume, Private Collection.
45⅛	6⅝	17¾	32⅛	3+3	India . .	Dr. Falconer, British Museum.
45	7⅜	22½	33¾	3+3	Mayoghur, Cent. Provinces	Sir John Morris, K.C.S.I.
45	7¼	44⅞	...	3+3	Western Ghauts	Major-Gen. Arthur Ellis, C.S.I.
-45	...	...	...	...	Cent. Provinces	Bombay Natural History Society's Museum.
44⅛	7⅞	44⅜	45⅞	3+3	Rangeer, Cent. Provinces	Col. W. J. Morris.
-44	...	34	...	3+3	Cent. Provinces	J. D. Inverarity.
-44	9	Height at shoulder 53½		...	Rewah, Central Provinces	Major A. E. Ward.
44	6	9¼	24⅜	3+3	Cent. Provinces	Capt. C. F. Pinney.
43⅝	5⅝	(single horn)	...	3	...	Hume Collection, British Museum.
43¼	10	...	...	3+3	..	Capt. C. Hutton Dowson.
43⅜	6¼	20⅜	29⅛	3+3	...	Sir Robert Harvey, Bart.
43	10½	...	...	...	Cuttack . .	Indian Museum.
43	7½	35½	38	3+3	Gwalior . .	Sir Greville Smyth, Bart.
42¾	5⅜	26	32¼	3+3	Cent. Provinces	A. H. Pollen.
42½	6¼	15	27¾	4+4	Ghauts of Simrol	Col. J. Evans, British Museum.
41⅞	6¼	33⅛	35¼	3+3	Western Ghauts	Major-Gen. Arthur Ellis, C.S.I.
41¾	7	28¼	34¾	3+3	...	Hon. Walter Rothschild.
41⅝	7⅛	31¾	36¾	4+3	Nepal . .	B. H. Hodgson, British Museum.
41½	6¼	30½	36½	4+4	Cent. Provinces	P. Jay.
41	6⅜	18½	29	3+3	Cent. Provinces	Duke of Bedford.
-41	8½ above burr 10½ round ,,		palmated	3+3	North Gujerat .	S. C. Lex.
40½	5⅝	33	37¼	3+3	...	Hume Collection, British Museum.
40½	7½	24½	...	3+3	...	Major James Grant.
40¼	6¼	28⅛	32	3+3	Neilgherries .	Sir Victor Brooke's Collection. (Shot by the late Gen. Douglas Hamilton.)
-40	...	20½	...	3+3	Asirghur . .	J. D. Inverarity.
40	5¾	32¼	36	3+3	Ghauts of Simrol	Col. J. Evans, British Museum (see illustration).

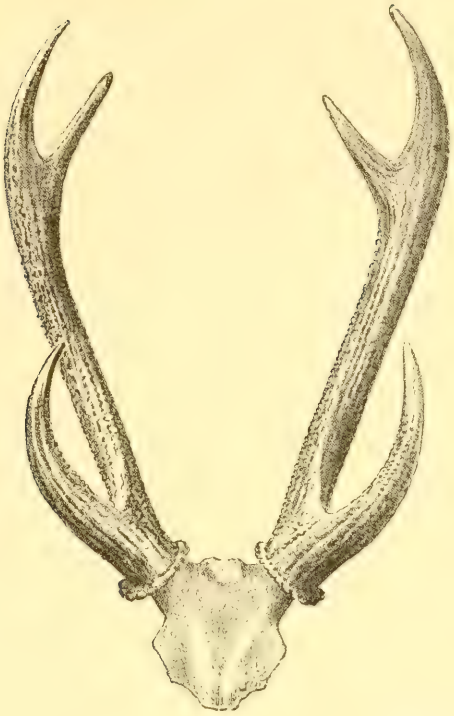
SAMBUR (Cervus unicolor)—*continued.*

Length on outside curve.	Circumference above brow tine.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
40⅝	6	22	27½	...	India . .	Sir Edmund G. Loder, Bart.
40	6	31½	33¾	4+4	Cent. Provinces .	H. P. Whitney.
–39½	8	26½	...	...	Nimar . .	J. N. Macleod.
39¼	7½	20½	26¾	3+4	.	Hume Collection, British Museum.
39¼	6	16½	20½	2+2	Nepal . .	H.R.H. Duke of Saxe-Coburg and Gotha.
–39	...	28¼	30¼	3+3	Asirghur . .	J. D. Inverarity.
38¾	6¾	24	29½	3+3	Western Ghauts	Major-Gen. Arthur Ellis, C.S.I.
38½	6¾	23¼	28⅞	3+3	...	Sir Robert Harvey, Bart.
38½	5¼	55	...	3+3	Western Ghauts	Major-Gen. Arthur Ellis, C.S.I.
38⅛	6⅞	30⅛	35	3+3	Neilgherries .	Sir Victor Brooke's Collection. (Shot by the late Gen. Douglas Hamilton.)
38	6½	29¾	41⅜	3+3	Moharli Forest, Chanda District, Cent. Provinces	Sir John Morris, K.C.S.I.
38	Height at shoulder		52	3+3	Cent. Provinces .	Capt. B. H. Bouchier.
38	5¾	28	28	3+3	. .	Capt. E. H. R. Hibbert.
37¾	5⅞	14	21¼	3+3	Nepal . .	B. H. Hodgson, British Museum.
37¾	6	29¼	31¾	3+3	Cent. Provinces .	Lieut.-Col. M. Cust.
37½	6¾	21⅜	25⅜	4+3	Do. .	Major C. S. Cumberland.
37½	5½	43	31	3+3	Chanda District, Cent. Provinces	L. Gisborne-Smith.
37½	5⅞	29	31½	3+3	Do. .	C. D. Twopeny.
37⅜	6¾	28⅛	31	3+3	Neilgherries .	Sir Victor Brooke's Collection. (Shot by the late Gen. Douglas Hamilton.)
37⅜	5½	19	23¾	3+3	Nimar, Central Provinces	Lieut.-Col. H. Wade-Dalton.
37¼	5⅜	19⅝	30¾	3+3	Cent. Provinces .	Major C. S. Cumberland.
37	6⅛	27⅛	28¾	3+3	...	H. C. V. Hunter.
–37	6.70	...	...	...	Mount Aboo .	Baron Edmond de Poncins.
37	9	13	31	3+3	Mounár Valley .	A. H. Sharpe.
36¾	6	17¾	27½	3+3	Salpooras Range	Col. J. Biddulph.
36½	5¾	29	34	3+3	Nimar, Central Provinces	Lieut.-Col. H. Wade-Dalton.

SAMBUR (Cervus unicolor)—*continued.*

Length on outside curve.	Circumference above brow tine.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
$35\frac{3}{4}$	6	21	$24\frac{1}{2}$	3+3	Cent. Provinces .	A. H. Pollen.
$-35\frac{1}{2}$	$8\frac{1}{2}$	18	$23\frac{1}{2}$	3+3	India . . .	Dublin Museum.
$-35\frac{3}{8}$.	$5\frac{7}{8}$	$21\frac{3}{4}$	$25\frac{7}{8}$	3+3	...	J. Carr Saunders.
$35\frac{3}{8}$	$5\frac{1}{2}$	$23\frac{1}{8}$	$28\frac{1}{2}$	3+3	Nepal . .	B. H. Hodgson, British Museum.
$35\frac{1}{4}$	$7\frac{3}{8}$	20	26	3+3	Bhotan . .	Sir Victor Brooke's Collection.
-35	8	...	$39\frac{1}{2}$	3+3	...	Viscount Powerscourt.
$-34\frac{1}{2}$	$7\frac{3}{4}$ burr	...	...	...	N. Kanara .	Lieut.-Col. L. L. Fenton.
-34	...	...	...	...	...	Otho Shaw.
$33\frac{7}{8}$	$5\frac{1}{4}$	$27\frac{1}{8}$	$30\frac{1}{8}$	3+3	...	H. C. V. Hunter.
$-33\frac{1}{2}$	12	...	$27\frac{1}{4}$	3+3	... .	Viscount Powerscourt.
33	$5\frac{1}{4}$	30	...	3+3	Umri, Central India	R. J. Heber-Percy.
32	$5\frac{1}{8}$	$20\frac{3}{8}$	25	3+4	Neilgherries .	St. George Littledale.
30	8	$21\frac{1}{2}$	$19\frac{5}{8}$	3+3	Ceylon . .	J. Ryan.
29	$4\frac{1}{2}$	25	$22\frac{1}{4}$	3+3	Do. . .	Earl Cairns.
$-20\frac{3}{4}$	$5\frac{5}{8}$	15	15	3+3	Do. . .	Dr. Percy Rendall.

A portion of a Sambur Horn, measuring $44\frac{1}{2}$ inches, is recorded in the *Journal of the Bombay Natural History Society*, iii. p. 228. The animal was shot by Mr. Gilbert in the Central Provinces, but got away minus this piece of his horn.



Drawn from a Burmese specimen in the British Museum.

EQUINE DEER (Cervus equinus).

Distribution—Burma and Malay Archipelago.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
35½	4⅜	22¾	...	3+3	Java . . .	Sir Victor Brooke's Collection. (Shot by the late Gen. Douglas Hamilton.)
34½	4⅞	17¼	22¼	3+3	Do. . .	Commander C. Keppel, R.N.
33¼	4⅞	19½	25	3+3	Do. . .	Do.
32	4½	19	16¼	3+3	Do. . .	The late H. J. H. Platt.
30⅞	6½	17¼	19⅝	7+7	...	Sir Edmund G. Loder, Bart.
30⅛	4⅜	20¾	21¼	3+3	Burma . .	British Museum.
29⅜	6	16⅝	20¾	3+3	...	Hume Collection, British Museum.

EQUINE DEER (Cervus equinus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
28¼	4½	11½	12½	3+3	...	Sir Edmund G. Loder, Bart.
26½	6¾	24½	...	3+3	Perak . .	Perak Museum.
23⅛	7	15⅜	...	3+3	Borneo . .	H. B. Low, British Museum.
19⅝	4¼	16⅞	16⅞	4+3	...	Hume Collection, British Museum.
16¼	4¼	5⅝	...	2+3	Borneo . .	W. B. Pryer, British Museum.

SWINHOE'S DEER (Cervus swinhoei).

Distribution—Island of Formosa.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
19¾	...	9	12⅞	3+3	Island of Formosa	Zoological Society, British Museum.
16⅛	3⅝	16	...	3+3	Do.	British Museum.
13⅝	4¾	13⅛	...	4+4	Do.	Zoological Society, British Museum.
5⅞	2⅛	6¼	...	2+3	Do.	British Museum.

THE PHILIPPINE DEER (Cervus philippinus).

The Philippine deer is a very stout-built, short-limbed, powerful animal, in carriage and general appearance closely resembling the common Sambur (*Cervus unicolor*). Sir Victor Brooke, Bart., P.Z.S., 1877, p. 51.

Distribution—Island of Luzon, Philippines.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
16	4	10½	8½	3+3	Philippine Islands .	Sir Edmund G. Loder, Bart.
13⅛	4½	11⅝	11¾	3+3	Basilan . . .	Everett, British Museum.
13½	4⅜	12⅛	12½	3+3	Philippine Islands .	Do.

MARIANE DEER (Cervus marianus).

The late Sir Victor Brooke believed that *Cervus philippinus* and *C. marianus* were identical.

Distribution—Philippine Islands.

Length on outside curve.	Circumference.	Tip to Tip.	Points.	Habitat.	Owner.
21	$4\frac{3}{4}$	$5\frac{1}{2}$	3+3	Philippine Islands .	Sir Edmund G. Loder, Bart.
$19\frac{5}{8}$	$5\frac{1}{4}$	$7\frac{1}{2}$	4+4	Do. . .	Capt. Belcher, British Museum.
$18\frac{7}{8}$	$5\frac{1}{4}$	$9\frac{3}{4}$	3+5	Do. . .	Do.
$18\frac{3}{8}$	$5\frac{1}{8}$	$14\frac{3}{4}$	4+3	Do. . .	Do.
18	$4\frac{5}{8}$	13	4+4	Do. . .	Do.
$15\frac{1}{8}$	$5\frac{1}{2}$	$11\frac{1}{4}$	3+3	Do. . .	Do.

Admiral J. R. Kennedy killed a stag closely resembling a Sambur on the island of Mauritius.

WEIGHT 20 stone.

Length on outside curve.	Brow antler.	Tip to tip.	Points.
36	$11\frac{1}{2}$	$11\frac{1}{2}$	3+3

Another similar animal weighing 19 stone 3 lbs., with 34-inch horns and a $14\frac{1}{2}$-inch brow antler, was shot by the same gentleman on the island of Rodriguez.

HOG DEER (Cervus porcinus).

HEIGHT at shoulder about 26 to 30 inches.

Distribution—In the Indo-Gangetic Plain, everywhere from Sind and the Punjab to Assam (W. T. Blanford).

Length on outside curve.	Circumference above brow tine.	Tip to Tip.	Habitat.	Owner.
–21	3¼	15¼	Pegu, Burma .	Major-Gen. E. M. Norie.
–20½	3	9⅛	N.W. Provinces .	J. Nugent.
–20⅜	3⅛	...	Nepal . . .	Bombay Natural History Society's Museum.
–20	...	...	Burma . .	The late Lieut. R. C. Beavan, India Museum.
–19½	...	...	Ganges, Khadir .	Lieut. H. S. King.
19½	3⅛	13⅝	Doodla Swamp, N.W. Provinces	Capt. W. E. Stobart.
19½	3⅜	...	Nepal . . .	Bombay Natural History Society's Museum.
19¼	3⅛	9½	India . . .	A. O. Hume, Private Collection.
19⅛	3¼	16½	Burma . . .	Sir Victor Brooke's Collection.
19⅛	3⅜	18¾	India . . .	H. C. V. Hunter.
17¾	3½	9¼	Nepal . . .	B. H. Hodgson.

HOG DEER (Cervus porcinus)—*continued.*

Length on outside curve.	Circumference above brow tine.	Tip to Tip.	Habitat.	Owner.
$17\frac{1}{8}$	...	$9\frac{1}{4}$	India . . .	J. Carr Saunders.
–17	$3\frac{1}{8}$	...	Naini Tal Terai .	Major-General Alexander A. A. Kinloch.
$16\frac{7}{8}$	3	$10\frac{3}{8}$	...	British Museum.
–$16\frac{1}{2}$	$3\frac{3}{8}$	$14\frac{1}{8}$	Nepal . . .	A. E. Leatham.
$16\frac{1}{8}$	$2\frac{7}{8}$	$8\frac{5}{8}$	India . . .	Gen. Hardwicke, British Museum.
$15\frac{1}{2}$	$2\frac{5}{8}$	$7\frac{1}{4}$	Do. . . .	Sir Edmund G. Loder, Bart.
14	3	$8\frac{3}{8}$	Nepal . . .	H.R.H. Duke of Saxe-Coburg and Gotha.
–13	$2\frac{1}{2}$	9	Do. . .	Dublin Museum.
13	$3\frac{1}{8}$	$12\frac{3}{4}$	Do. . .	Hon. Walter Rothschild.

KUHL'S STAG (Cervus kuhli).

Type—Mus. Leyden.

This species was originally described by Muller from specimens collected by Diard in the Bavian Islands, to which locality the species, as far as is at present known, is confined. The auditory bullœ in *Cervus kuhli* are largely inflated. By this character the skull may be distinguished from that of any of the Rusine deer, with the exception of *C. porcinus.* The skull of *C. kuhli* differs from that of *C. porcinus* in having the facial portion anterior to the orbits much more compressed, and the orbits much more prominent. *C. kuhli* has proportionally much longer limbs than *C. porcinus;* and all the hairs of the back and sides are annulated in the former and not in the latter species. The young of *C. kuhli* are unspotted, which is not the case with those of *C. porcinus.* Both species are devoid of upper canines.

[Sir VICTOR BROOKE, P.Z.S. 1878, p. 902.]

Distribution—Bavian Islands.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
$9\frac{3}{4}$	$2\frac{7}{8}$	$10\frac{7}{8}$	$10\frac{7}{8}$	3+3	Java . .	British Museum.

MOLUCCAN DEER (Cervus moluccensis).

Dimensions.

	Eng. inches.
Total length of skull in a straight line	11
From ant. rim of orbit to free extremity of præmaxillæ	5.7
Length of upper molar series	1.8
„ premolar series	1.4
Greatest length of nasals	3.5
Length of præmaxillæ	2.9
Across the lower rims of orbits at the widest place	4.5
Length of humerus	7.9
„ radius	7.2
„ metacarpal cannon	6.1
„ femur	9.7
„ tibia	10.5
„ metatarsal cannon	7

[Sir Victor Brooke, P.Z.S. 1878, p. 904.]

Distribution—Molucca Islands.

Length on outside curve.	Circumference.	Tip to Tip.	Points.	Habitat.	Owner.
$36\frac{1}{8}$	$4\frac{5}{8}$	$18\frac{1}{2}$	3+3	...	Sir Edmund G. Loder, Bart.
$8\frac{3}{4}$	4	$5\frac{1}{8}$	...	Batchian	A. R. Wallace, British Museum.
$6\frac{1}{4}$	$3\frac{3}{8}$	$5\frac{5}{8}$	...	...	British Museum.

SWAMP DEER (**Cervus duvauceli**).

HEIGHT at shoulder about 44 inches. WEIGHT about 51 stone 3 lbs.

(Maharajah of Kuch Behar).

Distribution—Along the base of the Himalayas from Upper Assam to the Kyarda Dún, west of the Jumna, throughout Assam; in a few places in the Indo-Gangetic Plain, from the Eastern Sunderbuns to Bahálaypur and Rohri in Upper Sind; and locally throughout the area between the Ganges and the Godávari, as far east as Mandla (W. T. Blanford).

SWAMP DEER (Cervus duvauceli)—*continued.*

Length on out side curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
41	5½	(one horn broken)		6+6	Cent. Provinces	Major C. S. Cumberland.
39¼	5	35½	37½	5+6	India . .	Do.
-38¼	6¼	(shed horns)		6+5	Cent. Provinces	C. F. Egerton.
-38	...	43	...	6+6	Do.	J. D. Inverarity.
-38	...	...	...	6+6	Do.	Capt. B. H. Bouchier.
37⅜	5¼	23⅝	28½	7+6	...	Sir Edmund G. Loder, Bart.
36½	5	20	(outside)	23	Mavella District	Measured by Major A. E. Ward.
36	5	29¾	33⅜	6+5	Nepal . .	B. H. Hodgson, British Museum.
-36	...	29	...	6+6	Do. . .	J. D. Inverarity.
35¼	5¾	22¼	...	7+6	Do. . .	H. C. V. Hunter.
35⅜	4⅞	27	29¾	...	...	Sir Victor Brooke's Collection.
34¾	5⅝	38¼	...	5+5	Cent. Provinces	Major C. S. Cumberland.
-34½	5½	24⅞	28⅞	6+5	Nepal . .	A. E. Leatham.
-33½	...	...	36	6+6	Mandla District	Capt. J. Forsyth.
33½	4⅜	28½	32¼	5+5	N.W. Provinces	Capt. Chambers Didham.
32⅞	5¼	22⅜	26⅜	5+6	...	A. O. Hume, Private Collection.
32⅝	5	33¼	35	6+6	...	Sir Robert Harvey, Bart.
32¾	5	27½	...	6+7	Kuch Behar .	Capt. Henry Streatfeild.
32½	4¼	32	33½	5+5	Cent. Provinces	Capt. E. D. White.
32⅛	5⅛	19⅝	24½	7+7	Nepal . .	H.R.H. Duke of Saxe-Coburg and Gotha.
31⅞	4¾	27⅛	30	7+8	Do. . .	B. H. Hodgson, British Museum.
30½	5¾	28½	32¾	8+8	Cent. Provinces	H. Douglas Taylor.
29½	4½	19	26¼	7+8	Kuch Behar .	Lord Wolverton.
29⅜	5	19½	22¼	8+8	...	Hume Collection, British Museum.
29⅛	4¾	19⅞	23¼	6+5	...	Earl of Derby, British Museum.
29	4¼	25⅛	26⅞	9+8	Nepal . .	B. H. Hodgson, British Museum.
27½	5½	...	...	...	...	Dublin Museum.

SWAMP DEER (Cervus duvauceli)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
27	$4\frac{5}{8}$	$27\frac{1}{2}$	...	6+5	..	Hon. Walter Rothschild.
26	6	21	$22\frac{1}{2}$	6+6	Assam . .	A. H. Straker.
25·60	5·90	...	...	...	Do. . .	Baron Edmond de Poncins.

SCHOMBURGK'S DEER (Cervus schomburgki).

Distribution—Northern parts of Siam.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
$30\frac{1}{8}$	5	$15\frac{5}{8}$	33	10+10	Siam . .	British Museum.
$29\frac{7}{8}$	$5\frac{1}{8}$	$23\frac{5}{8}$	$26\frac{7}{8}$	9+8	Do. . .	Do.
$29\frac{3}{4}$	$4\frac{3}{4}$	$28\frac{3}{8}$	$31\frac{5}{8}$	10+11	Do. . .	Do.
$28\frac{1}{2}$	$5\frac{1}{4}$	11	$29\frac{3}{8}$	11+9	...	Sir Victor Brooke's Collection.
$27\frac{7}{8}$	$5\frac{3}{8}$	14	$24\frac{1}{2}$	9+8	Siam . .	British Museum.
$27\frac{3}{4}$	$4\frac{3}{8}$	$18\frac{1}{2}$	$24\frac{7}{8}$	7+8	Do. . .	Do.

BURMESE STAG or THEMIN (Cervus eldi).

Discovered in 1838 by Lieut. Eld. HEIGHT at shoulder about 45 inches. ♂ WEIGHT about 210 to 245 lbs. ♀ WEIGHT about 140 lbs. (Beavan).

Distribution—Burma and Hainan, and the Malay Peninsula in flat ground.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Length of brow tine.	Habitat.	Owner.
42	5	29	24	2+3	...	Burma . .	A. H. Collins.
39⅝	5	31⅜	36⅝	20 (small points)	15¾	Siam . .	Sir Edmund G. Loder, Bart.
38⅞	6¼	25½	30⅜	16+19	...	...	British Museum.
37½	5⅜	20¼	30½	5+5	...	...	Do.
37	6⅛	...	31¼	...	10½	Burma . .	Rowland Ward.
36⅛	5½	28¾	31¾	4+3	...	Do. . .	A. O. Hume, Private Collection.
35¾	4⅝	19¾	26¼	4+3	...	Do. . .	Viscount Powerscourt.
34⅞	5½	27½	32	6+6	...	Do. . .	Hume Collection, Brit. Museum.
34½	4	21¼	27	6+6	...	Do. . .	Viscount Powerscourt.
34⅛	5	24	32¼	6+6	...	Do. . .	Hon. Walter Rothschild.

* Measured on front of horn from point to point 56½ inches.

BURMESE STAG or THEMIN (Cervus eldi)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Length of brow tine.	Habitat.	Owner.
34	5⅞	23½	29¾	10+10	...	Burma . .	J. Carr Saunders.
–33¾	4¾	17⅜	24⅜	5+4	...	Do. . .	Capt. G. H. Mockler.
33½	...	...	40	...	15	Pegu Jungles, Burma	Col. Pole Carew.
33⅛	5⅛	33⅛	37¼	5+5	...	Burma . .	Sir Edmund G. Loder, Bart.
33	4⅝	28⅞	32⅛	3+3	...	Do. . .	Sir Victor Brooke's Collection.
32⅛	5⅜	20¼	20½	4+3	...	Do. . .	Gen. Sir Henry Collett, K.C.B.
32	4½	18¼	24¼	6+5	...	Do. . .	Col. J. Biddulph.
31⅛	5	25⅞	29⅛	6+7	...	Nepal . .	B. H. Hodgson, British Museum.
–24	4½	18	18½	5+5	...	Burma . .	Dublin Museum.
18½	3⅝	12½	13½	5+6	...	Formosa .	R. Swinhoe, British Museum.
13⅝	3¼	...	12⅜	5+6	...	Siam . .	British Museum.

PÈRE DAVID'S DEER (Cervus davidianus).

HEIGHT at shoulder about 45 inches.

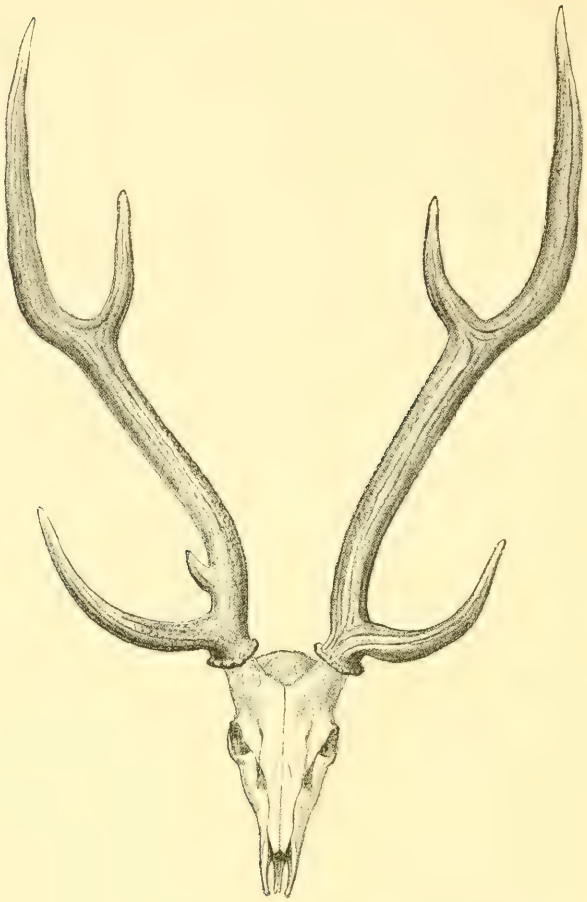
Distribution—North-Eastern Palæarctic Region.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
32⅞	6⅜	13⅝	18½	8+8	Near Pekin . .	Sir Edmund G. Loder, Bart.
–30¾	5	35 1/16	35 1/16	11+10	Imperial Park, Pekin	Paris Museum (Type Specimen), Père R. David.
28¼	5⅜	26½	...	3+3	Captive Specimen .	Hon. Walter Rothschild.
27	5⅞	20¼	...	6+5	...	British Museum.
22	4⅝	...	...	4+3	Bred in England .	Duke of Bedford.

CHINESE RED DEER (Cervus xanthopygus).

Distribution—Northern Asia from the Caucasus through Siberia to Amurland and thence to Northern China (Lydekker).

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
–20⅞	4⅜	14¼	16⅛	3+4	Mantchuria . .	Paris Museum (Type Specimen), Mr. Fontamer.



Drawn from a specimen in the Hume Collection, now in British Museum.

AXIS (Cervus axis).

Native Name—"Chital" or "Chitra."

HEIGHT at shoulder about 36 inches. WEIGHT, alive, estimated by the late Sir Samuel Baker, about 250 lbs.

Distribution—Throughout India and Ceylon.

AXIS (Cervus axis)—*continued.*

Length on outside curve.	Circumference above first point.	Tip to Tip	Points.	Habitat.	Owner.
–38¼	4¾	19½	24¼	Asirgarh Jungle, Central Provinces	Lieut.-Col. M. Cust.
37½	4¼	24⅜	4+4	...	A. O. Hume, Private Collection.
37⅜	4	24½	3+3	...	Do.
37¼	4¼	16⅞	4+5	...	Sir Victor Brooke's Collection.
36¾	4⅜	19⅛	4+4	...	The late W. C. Oswell.
36½	4½	25	3+4	Berar . . .	C. H. Seely.
–36½	4½	15⅝	3+4	Nepal . . .	A. E. Leatham.
36	4¼	25¼	3+4	...	British Museum.
35½	4¼	18⅛	4+4	...	Sir Edmund G. Loder, Bart.
35⅜	4⅝	23	3+4	...	British Museum.
35¼	4⅛	22⅞	3+3	Western Ghauts .	Major-Gen. Arthur Ellis, C.S.I.
35	4½	...	...	North Kanara .	Bombay Natural History Society's Museum.
–35	3½	18	...	...	W. S. Murray.
34¾	4½	17¾	...	...	H.R.H. Duke of Saxe-Coburg and Gotha.
–34¾	5¾	12⅜	4+4	N.W. Provinces .	Surgeon-Captain E. M'K. Williams.
34½	6½	15½	5+4	Oudh . . .	Capt. G. Campbell.
–34½	...	22½	3+3	Taptee River, Asseerghur	J. D. Inverarity.
–34¼	4⅞ (burr)	...	...	North Kanara . .	Lieut.-Col. L. L. Fenton.
34	4¾	16½	3+3	...	Col. Pole Carew.
34	...	...	...	...	Otho Shaw.
33⅝	3⅞	(one horn broken)	3+3	...	British Museum.
33½	4⅝	16½	3+3	Central Provinces .	H. Douglas Taylor.
33½	4⅜	23⅝	4+5	Do. .	Major C. S. Cumberland.
33½	...	...	...	R. Ahree District, Central Provinces	Colonel F. C. Lister-Kay.
33¼	3⅞	13	2+3	Yeddacurra, South India	Sir Victor Brooke's Collection. (Shot by the late Gen. Douglas Hamilton.)
–33	4¼	16½	5+4	...	Dublin Museum.
–33	6⅛	22	4+4	...	Major-General Alexander A. A. Kinloch.

AXIS (Cervus axis)—*continued.*

Length on outside curve.	Circumference above first point.	Tip to Tip.	Points.	Habitat.	Owner.
33	$3\frac{3}{4}$	$19\frac{3}{4}$	3+3	N.W. Provinces .	Capt. Chambers-Didham.
33	$5\frac{1}{2}$ (burr)	...	...	Gir Forest, Kathiawar	Lieut.-Col. L. L. Fenton.
$32\frac{7}{8}$	$4\frac{3}{8}$	$21\frac{1}{2}$	3+3	...	Hon. Walter Rothschild.
$32\frac{3}{4}$	$3\frac{7}{8}$	14	3+3	...	Sir James Anderson, Bart.
$32\frac{1}{2}$	$4\frac{1}{4}$	$23\frac{3}{8}$	5+4	Karkoor, South India	Sir Victor Brooke's Collection.
$32\frac{3}{8}$	$3\frac{7}{8}$	$15\frac{1}{4}$	3+3	Central Provinces .	Major C. S. Cumberland.
–$32\frac{1}{4}$	$4\frac{1}{4}$	$14\frac{1}{2}$	4+5	North Oudh . .	Lieut.-Col. J. W. M. Cotton.
$31\frac{3}{4}$	$3\frac{1}{4}$	$16\frac{1}{2}$	3+3	Central Provinces .	Col. G. D. F. Sulivan.
$31\frac{1}{2}$	$3\frac{3}{4}$	$17\frac{1}{2}$	3+3	Ceylon . . .	Count Felice Scheibler.
–$31\frac{1}{2}$	...	...	...	Punjab . . .	Capt. A. Hicks-Beach.
$31\frac{1}{2}$	$3\frac{1}{2}$	18	3+3	...	Durban Museum.
$31\frac{1}{4}$	$3\frac{3}{4}$	$10\frac{7}{8}$	3+3	...	H. C. V. Hunter.
$30\frac{3}{8}$	$4\frac{1}{8}$	$21\frac{3}{4}$	4+4	...	Sir Robert Harvey, Bart.
30	$3\frac{1}{2}$	15	4+3	Ceylon . . .	Lieut.-Col. H. Wade-Dalton.
$29\frac{7}{8}$	$4\frac{1}{8}$	$20\frac{1}{4}$	3+3	Do. . . .	British Museum.
$29\frac{7}{8}$	$3\frac{1}{2}$	$4\frac{3}{8}$	4+4	Nepal . . .	B. H. Hodgson, British Museum.
$29\frac{7}{8}$	$3\frac{5}{8}$	$16\frac{1}{2}$	3+3	India . . .	Sir Robert Harvey, Bart.
$29\frac{3}{8}$	$4\frac{1}{8}$	$17\frac{5}{8}$	5+4	Do. . . .	British Museum.
$28\frac{3}{4}$	$3\frac{1}{4}$	$11\frac{1}{2}$	3+3	Ceylon . . .	G. O. Bigge.
$28\frac{5}{8}$	$3\frac{3}{8}$	$15\frac{1}{4}$	3+3	India . . .	Martyn Kennard.
27	$3\frac{1}{2}$	$8\frac{1}{2}$	3+3	Ceylon . . .	Capt. Lewis Jones, R.E.
26	$3\frac{3}{8}$	14	3+3	Central Provinces .	Capt. C. F. Pinney.
$25\frac{1}{2}$	3	18	3+3	Ceylon . . .	Dr. Percy Rendall.
–20 Big beast	Weight killed in	172 lbs. rutting	... season.	Madras . . .	M. Loam.

JAPANESE DEER (Cervus sika).

Several herds of these Deer have been acclimatised in Great Britain, notably by the late Sir Victor Brooke, Bart., at Colebrooke, Ireland, and Viscount Powerscourt, County Wicklow, as well as Sir Robert Harvey, Bart., at Langley, Slough.

Distribution—Japan and Northern Siam.

Length.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
$31\frac{1}{4}$	$5\frac{1}{4}$	$27\frac{1}{8}$	$27\frac{3}{8}$	4+4	...	Sir Edmund G. Loder, Bart.
$25\frac{3}{8}$	$4\frac{1}{8}$	$20\frac{1}{4}$	...	4+4	...	Do.
$22\frac{1}{2}$	$3\frac{1}{8}$	$16\frac{1}{8}$	$19\frac{1}{2}$	8+9	North Japan .	St. George Littledale.
22	4	$16\frac{3}{4}$	$13\frac{3}{4}$	5+4	Bred in Ireland .	Sir Victor Brooke's Collection.
$21\frac{5}{8}$	$3\frac{3}{8}$	$16\frac{1}{2}$	$20\frac{1}{8}$	10+6	Islands of Yezzo .	Do.
$18\frac{1}{2}$	$3\frac{3}{4}$	...	12	9	Bred in Ireland .	Do.
$18\frac{1}{2}$	$3\frac{1}{8}$	11	$12\frac{1}{4}$	4+4	Kobe, Japan .	Dr. Percy Rendall.
$16\frac{3}{4}$	$3\frac{1}{8}$	...	13	4+3	Japan . . .	British Museum.
$16\frac{5}{8}$	3	$9\frac{5}{8}$	10	4+3	Bred in Ireland .	Hon. J. Ward.
$15\frac{1}{2}$	$2\frac{3}{4}$	$9\frac{3}{4}$	$10\frac{1}{2}$	4+4	Bred in England .	Duke of Bedford.
$15\frac{1}{4}$	$3\frac{3}{8}$	$12\frac{1}{4}$	$10\frac{1}{2}$	4+4	Bred in Ireland .	Hon. R. A. Ward.

MANTCHURIAN DEER (Cervus mantchuricus).

This species is very closely allied to *Cervus sika.*

Distribution—Northern China.

Length.	Circumference.	Tip to Tip.	Points.	Habitat.	Owner.
–26	$4\frac{1}{4}$	$13\frac{3}{8}$	4+4	Mantchuria . . .	Paris Museum.
$15\frac{3}{8}$	3	20	4+4	South Ussuri, Mantchuria	British Museum.

FORMOSA DEER (Cervus taëvanus).

Distribution—Mountains of Formosa.

Length.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
$19\frac{3}{4}$	$3\frac{3}{8}$	13	$16\frac{3}{8}$	4+4	Islands of Formosa .	British Museum.

(Cervus dejeani).

Length.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
$30\frac{3}{8}$	$5\frac{1}{2}$	$15\frac{3}{8}$	$18\frac{1}{2}$	3+3	Ta-tsien-lou Setc huan	Paris Museum (Type Specimen).

DYBOWSKI'S DEER (Cervus dybowski).

The horns of the type specimen have the same number of points as the specimen below, and are 22 inches in length.

Distribution—The Upper Ussuri District of Mantchuria.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
24	4	$22\frac{1}{2}$	19	4+4	Mantchuria .	Hon. Walter Rothschild.

From a Photograph by Whyte of Inverness.

Scotch Red Deer shot by Lord Burton (20 points).

RED DEER (Cervus elaphus).

WEIGHT of a Red Deer shot at Spetchley Park: gross weight as he fell, 419 lbs.; when cleaned and dressed, 260 lbs.; haunch, 55 lbs. WEIGHT of one killed by the fourteenth Earl of Derby at Knowsley, 424 lbs. clean, *i.e.* after gralloching.

Distribution—Europe, Western Asia, and North Africa.

Length round outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest spread inside.	Points.	Weight.	Habitat.	Owner.
					st. lbs.		
–53·54	10·04	...	...	...		Germany .	Count G. Andrassy.
–50$\frac{2}{5}$	...	tips, 30	55$\frac{9}{10}$ (outside)	5+6	...	Pilas Mountains	Duke of Ratibor.
–50	9	43	44	23	0 41 (horns)	Hungary .	King of Saxony.
–49$\frac{3}{5}$	...	...	...	...	...	Raudauc .	Prince Rohan.
–49	10$\frac{3}{10}$	...	75$\frac{1}{2}$ (outside)	12	0 21 (horns)	Hungary .	Prince Philip of Saxe-Coburg.

RED DEER (Cervus elaphus)—*continued.*

Length round outside curve.	Circumference between bez and trez times.	Tip to Tip.	Widest spread inside.	Points.	Weight.	Habitat.	Owner.
					st. lbs.		
-48	$8\frac{7}{8}$	...	...	8+11	...	Hungary .	Prince Lichtenstein.
-48	9	48	27	9+10	...	Saxe-Coburg and Gotha	H. R. H. Duke of Saxe-Coburg and Gotha.
$-47\frac{1}{2}$	9	$20\frac{1}{2}$ brow antlers)	$48\frac{1}{2}$ (outside)	14	...	Hungary .	Viscount Powerscourt.
$-46\frac{1}{2}$	$9\frac{1}{2}$	...	...	16	0 $20\frac{7}{16}$ (horns)	Leanyfalu .	Duke of Ratibor.
-46	9	21	$41\frac{1}{2}$	13	...	Poland .	Viscount Powerscourt.
-46	9	60	36	10+8	...	Saxe-Coburg and Gotha	H. R. H. Duke of Saxe-Coburg and Gotha.
-46	10	$54\frac{1}{2}$	35	9+9	...	Bukowina, Hungary	Count Erbach.
$-45\frac{5}{8}$	$6\frac{1}{8}$	$26\frac{3}{8}$	$38\frac{1}{4}$	5+5	...	Hungary .	Major-Gen. Arthur Ellis, C.S.I.
-45	9	38	33	5+6	...	Saxe-Coburg and Gotha	H. R. H. Duke of Saxe-Coburg and Gotha.
$44\frac{5}{8}$	$6\frac{3}{4}$	39	40	7+7	..	Hungary .	Major-Gen. Arthur Ellis, C.S.I.
-44	10	45	31	9+11	...	Do. .	Count Erbach.
43	...	...	...	20 (malformed)	20 (horns)	Valpo .	Prince H. Windischgraetz.
$-42\frac{7}{16}$	$8\frac{1}{2}$	...	...	18	0 $19\frac{1}{2}$ (horns)	Szilvas .	Count Bombelles.
$-42\frac{3}{16}$	$8\frac{1}{2}$	...	...	...	0 $19\frac{1}{4}$	Ungmegyci .	Count Szechenyi.
$-42\frac{1}{16}$	$9\frac{1}{16}$	...	...	20	0 18 (horns)	Munkag .	Count J. Hoyos.
-42	$5\frac{1}{2}$	...	30	...	...	Styria .	Sir Clement Hill, Bart.
-42	10	43	45	7+8	...	Saxe-Coburg and Gotha	H. R. H. Duke of Saxe-Coburg and Gotha.
$41\frac{7}{8}$	$5\frac{1}{4}$	...	$25\frac{1}{4}$	6+6	...	Germany .	British Museum.
-41	7	$22\frac{1}{2}$	35	7+7	...	Inverness, Scotland (100 years old)	W. H. Walker.
$-40\frac{1}{4}$	5	$20\frac{3}{4}$	$27\frac{3}{8}$	7+6	...	Tyrol . .	H. R. H. Duke of Saxe-Coburg and Gotha.
$-40\frac{1}{16}$	$8\frac{1}{16}$	...	...	28	0 $18\frac{1}{2}$ (horns)	Agaré .	Count Festics.
-40	10	36	31	6+6	...	Tyrol . .	H. R. H. Duke Alfred of Saxe-Coburg and Gotha.
-40	...	...	$36\frac{1}{2}$	17	...	Spain . .	Abel Chapman.
-40	10	49	28	9+9	...	Saxe-Coburg and Gotha	H. R. H. Duke of Saxe-Coburg and Gotha.
$39\frac{5}{8}$	$5\frac{1}{4}$	$14\frac{1}{2}$	$26\frac{3}{8}$	7+7	26 11	Ireland (age 8 years)	Sir Victor Brooke's Collection.
-39	$6\frac{1}{2}$	...	34	6+6	...	Guisachan .	Lord Tweedmouth.

RED DEER (Cervus elaphus)—*continued.*

Length round outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest spread inside.	Points.	Weight.	Habitat.	Owner.
					st. lbs.		
39	8	30	22	6+6	...	Saxe-Coburg and Gotha	H. R. H. Duke Philip of Saxe-Coburg and Gotha.
38⅞*	5⅜	...	...	5+6	...	N. Africa .	Sir Edmund G. Loder, Bart.
38½	5⅛	17⅞	31½	6+6	...	Quantock, Exmoor	Lord Ebrington.
38	6	33	27¼	5+4	...	Hungary .	F. Wrench.
38	5⅜	20	30⅝	10+8	25 0 (clean)	Colebrooke	Sir Douglas Brooke, Bart.
-38	8½	34	29	5+5	...	Tyrol . .	H. R. H. Duke Alfred of Saxe-Coburg and Gotha.
38	7½	39	34¾	7+5	...	Do. .	H. R. H. Duke of Saxe-Coburg and Gotha.
37⅞	9¼	20⅜	26½	7+7	...	Scotland .	Sir Humphrey de Trafford, Bart.
37½	5	22¼	30¼	7+7	...	Exmoor .	C. Nolder.
37⅜	5⅝	14¾	26⅛	6+7	...	Hungary .	H. R. H. Duke of Saxe-Coburg and Gotha.
37⅛	5⅜	21¾	27⅝	6+6	...	Do. .	F. Wrench.
-37	12	48	23	16+16	...	Do. .	Prince Fosias of Saalfeld.
-37	8½	35	21	12+11	...	Saxe-Coburg and Gotha	H. R. H. Duke of Saxe-Coburg and Gotha.
36¾	6	21½	28⅞	6+7	..	Exmoor .	Capt. Acland Hood.
36½	6⅜	...	32½	9+9	...	Wairarapa, N. Zealand	J. S. Handyside.
36½	4¾	22⅞	28¾	4+4	...	N. Africa .	British Museum.
36½	6½	31½	32½	6+6	...	Scotland .	Sir Humphrey de Trafford, Bart.
36	5½	37	...	15	...	South Spain	The late Lord Lilford.
36	6½	24	30	6+6	...	Vaynol, N. Wales	G. W. D. Assheton-Smith.
36	5½	19 (white stag)	28½	9+11	...	Woburn Park	Duke of Bedford.
35½	5¼	26½	32⅜	13+11 (perished)	...	Ireland (dug up)	Sir Victor Brooke's Collection.
35½	5	20⅞	27½	6+6	...	Exmoor .	Lord Fortescue.
-35½	7	...	26½	20	...	Glenquoich	Lord Burton (see illustration).
35	4¾	...	30	9	...	Ireland .	Hon. A. Charteris.
-35	...	41¼	29	7+6	...	Scotland .	Sir Arthur Grant, Bart.
-35	5¾	26 (above trez)	33½	12	...	Guisachan .	Lord Tweedmouth.

* *Cervus barbarus.*

RED DEER (Cervus elaphus)—*continued.*

Length round outside curve.	Circumference between bez and trez times.	Tip to Tip.	Widest spread inside.	Points.	Weight.	Habitat.	Owner.
					st. lbs.		
35	4⅞	25½	32¾	5+6	...	Exmoor .	C. T. D. Acland.
34⅞	5⅞	23¼	31¼	6+6	...	Do. .	Lord Ebrington.
34½	4¼	18¼	27	6+5	...	Scotland .	J. R. Hutchison.
34½	7	33	26¾	20+20	...	Warnham Court	W. H. Lucas.
34½	5¼	37½	34½	12	...	Braemore .	Sir John Fowler.
34¼	4⅛	16¼	24⅜	5+5	...	Scotland .	F. Devas.
34¼	5½	18½ (white stag)	26	8+8	...	Woburn Park	Duke of Bedford.
34	4¾	...	31½	6+5	26 8	Muckross, Ireland	Ralph Sneyd.
34	4½	...	23	6+6	...	Stowe Park	H.R.H. La Comtesse de Paris.
34	4⅛	13½	25	5+5	...	Colebrooke	Capt. J. M. Rogers.
-34	4⅜	19	28	6+5	...	Rothiemurchus, Inverness	A. Basil Brooke.
33¾	5	...	26	5+5	...	Muckross, Ireland	Hon. Mrs. Bourke.
33½	4⅞	.	33	6+6	...	Stowe Park	H.R.H. le Duc d'Orleans.
33½	5¼	21½	28½	9+9	...	Woburn Park	Duke of Bedford.
33	5⅞	13	25	8+7	...	Exmoor .	Lord Ebrington.
-33	8	32	24	6+5	...	Saxe-Coburg and Gotha	H.H. Prince Reuss.
33	4¾	26½	29½	6+8	..	Tyrol . .	Lord Glenesk.
-32¾	5	25¾	29¼	6+6	...	Ardverikie .	W. H. Walker.
32	8½	27	24	6+5	...	Saxe-Coburg and Gotha	H. R. H. Prince Philip of Saxe-Coburg and Gotha.
32	4½	15¾	26	6+6	...	Exmoor .	Col. Hornby.
32	5⅛	30⅜	30¾	7+4	...	Do. .	Lord Fortescue.
32	5	..	22½	5+4	19 0	Rannoch, Scotland	Sir W. G. Pearce, Bart.
31¾	3¾	.	26½	4+4	...	Rhidorroch	Capt. F. Cookson.
31¾	4¾	..	25½	6+5	...	Norway .	A. Brassey.
31¾	4¾	18	24¾	6+5	14 0	Inchgrundle Shank	Countess of Dudley.
31½	5	...	26½	12	17 0	Auchnasheen	J. F. Laycock.

RED DEER (Cervus elaphus)—*continued.*

Length round outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest spread inside.	Points.	Weight.	Habitat.	Owner.
					st. lbs.		
31½	4¾	...	28	4+3	...	Norway .	E. M. Denny.
31½	4½	...	24½	5+5		Do. .	H. Seton Karr.
31½	4⅜	20¼	25¾	3+3		Dalnacardoch	Hon. T. A. Brassey.
31½	5¾	10½	18	6+7		North Island, New Zealand	Rupert Wilkin.
31½	4¾	15¼	22½	5+5		Tyrol . .	Lord Glenesk.
31½	4	24½	29	5+4		Braulen .	J. Talbot Clifton.
31½	4⅜	8⅝	24	5+5		Glenmuick, N.B.	C. Lawrance.
31¼	4⅛	16	24⅛	7+5		Scotland .	Capt. F. Cookson.
31¼	4⅝	24⅞	32	5+3		Rosshire .	E. Lort-Phillips.
31¼	4	...	40¼	6+6		Scotland .	Dr. Fancourt-Barnes.
31	4¾	11	20¾	7+7		Muckross .	Ralph Sneyd.
31	4¾	18½	22	5+7		Ireland .	Dublin Museum.
-31	5¼	20¼	24	10		Scotland .	C. V. A. Peel.
30⅞	4⅜	25⅞	28⅛	5+6		Rhidorroch	W. R. Cookson.
30¾	4	9½	21	5+4		Craigannan	Maxwell Earle.
30¾	5	19½	24	6+5	.	Arisaig .	J. R. Hutchison.
30½	4⅛	13½	23½	6+6		Letterewe .	Gordon Wood.
30½	5	24½	29½	6+6		Exmoor .	Lord Fortescue.
30¼	3⅝	18⅛	25¼	5+5	...	Achray .	Stephenson H. Kent.
30¼	4	...	26½	5+5	19 10	Muckross .	Geoffrey Carr-Glyn.
-30¼	4½	15	22	8+7	...	Fasnakyle .	W. H. Walker.
30¼	4⅛	20	25½	6+5		Scotland .	H.R.H. le Duc d'Orleans.
-30	4⅜	...	25½	5+5		Stobhall .	J. G. Millais.
30	4⅜	....	24¼	4+5	.	Inchbrae .	W. H. Leslie.
-29¾	4	...	32	5+5	...	Stobhall .	J. G. Millais.
29½	4⅞	18½	23¼	5+5	...	Norway .	J. H. Thomas.

RED DEER (Cervus elaphus)—*continued.*

Length round outside curve.	Circumference between bez and trez times.	Tip to Tip.	Widest spread inside.	Points.	Weight.	Habitat.	Owner.
					st. lbs.		
29½	4	...	26	4+4	...	Lochnell .	Marquis of Queensberry.
29½	4½	...	27	6+6	...	Rannoch .	T. Weller-Poley.
29	3¾	11½	20¾	5+5	...	Rhidorroch	W. M. Clarke.
29	4	27½	30¼	4+2	...	Invermark .	Hon. R. Ward.
–29	5¼	25	...	12	...	Andalusia .	Abel Chapman.
–28½	5¼	26¼	...	13	...	Do. .	Do.
28	4⅛	...	28¼	5+4	17 7	Ben Canisp	Dr. Felix Semon.
27¾	4¾	18¾	24	5+5	16 7	Geldie .	Hon. J. Ward.
27¾	3¾	28	29¼	5+5	...	Do. .	Do.
27⅛*	4	25	25⅜	4+3	...	N. Africa .	British Museum.
27½	3½	...	23½	5+4	...	Loch Loyal	D'Arcy Chaytor.
–27	5½	...	30⅞	7+7	...	Glenquoich	Lord Burton.
26	4	13	20	3+3	...	Dalnacardoch	Lord Camden.
25⅜	3½	10⅜	19¾	3+3	...	Ardgour .	Lady James Douglas.

* *Cervus barbarus.*

The width of the six widest heads in the Duke of Fife's collection are as follows :—

40 38 37 35 35 35

The six longest horns of this celebrated collection are respectively—

37 36 35½ 35½ 35 35

The horns of one of the Red Deer in Mr. Lucas' Park at Warnham Court, Sussex, in 1889, had 34 points ; 1890, 34 points ; 1891, 37 points ; 1891, 47 points and weighed 17 lbs. ; 1893, 45 points, 16½ lbs.

TABLE SHOWING DETAILS OF THREE BEST HEADS IN EIGHT ANNUAL EXHIBITIONS HELD IN BUDA-PESTH.

[From the *Field*, January 11, 1896.]

Name of shooter.	No. of points.	Weight in lbs. avoirdupois.	Length along curve.	Circumference of burr.	Circumference above burr.	Circumference above middle tine.	Circumference below crown.
1888.		lbs.	in.	in.	in.	in.	in.
Prince Philip Coburg	12	21·01	40·94	12·21	10·63	7·09	8·27
Count F. Nadasdy	18	18·26	41·73	10·24	9·25	7·09	8·07
Count G. Erdody	20	17·05	45·27	9·84	8·07	7·28	7·48
1889.							
Prince Victor Ratibor	16	20·68	46·46	11·02	9·45	8·07	6·89
F. Pausinger	14	20·24	43·70	10·43	8·27	7·09	7·28
Count Mittrovszky	16	19·91	46·06	11·81	9·25	6·89	7·28
1890.							
Prince Philip Coburg	16	18·92	42·91	10·04	8·66	7·48	8·27
Count R. Erdody	18	19·14	43·70	10·04	8·46	7·09	9·64
Count Erwin Schonborn	20	18·81	42·13	10·24	9·25	6·69	7·87
1891.							
Count F. Nadasdy	16	17·60	42·13	11·61	10·24	7·09	7·68
Count M. Esterhazy	8	17·38	44·09	11·41	9·84	7·68	7·68
Count Bela Szechenyi	14	16·17	44·49	10·63	9·45	6·49	8·07
1892.							
Count Tassilo Festetics	20	15·73	44·49	9·05	7·87	9·05	12·21
Prince Philip Coburg	14	18·85	42·13	9·64	9·05	7·09	7·87
Count Bela Szechenyi	12	20·46	45·27	10·04	6·49	6·69	7·48
1893.							
Count Bela Szechenyi	20	22·55	46·06	10·63	9·05	6·69	8·46
Prince Philip Coburg	16	20·57	47·84	11·21	9·25	7·87	7·87
Count Tassilo Festetics	20	17·60	43·31	10·04	8·07	7·28	8·27
1894.							
Count G. Andrassy	16	23·36	53·54	10·04	8·47	7·28	7·28
Count F. Nadasdy	20	20·79	46·46	9·84	7·87	7·09	7·87
Jeno Kund	14	18·37	44·09	11·41	10·24	7·28	6·89
1895.							
Count B. Keglevich	14	20·06	42·91	9·64	8·66	7·68	7·28
G. Jankovich	16	16·06	42·91	9·84	8·27	6·69	7·09
Prince Philip Coburg	14	15·95	43·31	10·43	8·66	7·09	7·28

The last but one dimension was taken in the years 1888, 1889, and 1891, not above but below middle tine.

THE MARAL or CARPATHIAN STAG (Cervus maral).

AVERAGE WEIGHT—40 stone.

Distribution—(See below).

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Weight.	Habitat.	Owner.
					lbs.		
$48\frac{5}{8}$	$6\frac{1}{8}$	$38\frac{1}{4}$	$40\frac{7}{8}$	6+5	...	Altai . .	British Museum.
$48\frac{1}{2}$	6	30	$41\frac{1}{2}$	5+6	...	Ichater Dagh, Crimea	H.R.H. Duke of Saxe-Coburg and Gotha.

THE MARAL or CARPATHIAN STAG (Cervus maral)—*continued.*

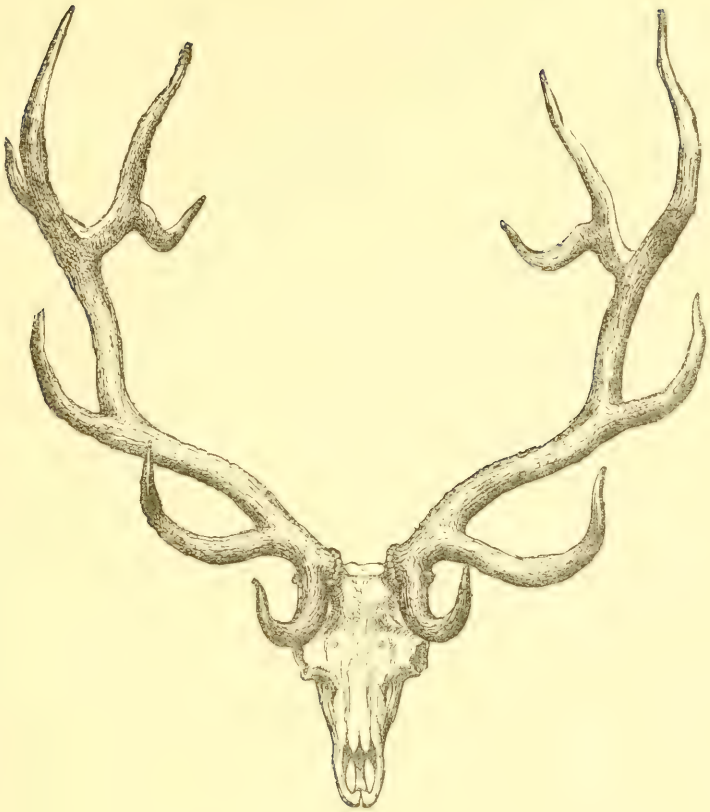
Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Weight.	Habitat.	Owner.
					lbs.		
48½	7¼	(single	horn)	12	...	Asia Minor .	Lord A. Hay, British Museum.
–48½	...	...	...	24	19½	Carpathians .	Prince H. Windischgraetz.
–48 9/16	...	...	...	20	25 3/16	Do. .	Do.
48	7¼	...	...	...	...	Caucasus .	St. George Littledale.
47⅝	5½	38	...	6+5	...	Do. .	Do.
47½	6⅝	41½	42	6+8	...	Carpathians .	Hon. Walter Rothschild.
47	7⅛	36	37¾	6+7	...	Caucasus .	St. George Littledale.
47	6¾	21¾	36¾	5+5	...	Ichater Dagh, Crimea	Sir Edmund G. Loder, Bart.
46¾	5⅜	18	33	8+8	...	Caucasus . (7000 feet)	St. George Littledale, British Museum.
45¾	7¾	25⅛	35⅜	6+7	...	Do.	Do.
45⅜	5¾	42	35⅜	6+7	...	Ak Dagh, Asia Minor	F. C. Selous.
45	8	36	42	11+10	....	Caucasus .	Prince Demidoff.
45⅛	7¾	...	...	9+6	...	Asia Minor .	Sir Edmund G. Loder, Bart.
44¾	6½	33¾	35⅛	7+5	...	Caucasus .	St. George Littledale.
44¼	6⅞	(single	horn)	9	...	Asia Minor .	C. G. Dansford, British Museum.
43½	6	...	38½	8+6	...	Do. .	E. N. Buxton.
43	...	...	...	20	20	Carpathians .	Prince H. Windischgraetz.
43	6½	20⅛	25⅜	8+2 (malformed)	...	Caucasus .	St. George Littledale.
42	5¾	44	37	7+7	...	Carpathians .	Viscount Powerscourt.
41⅛	5¾	15½	28½	6+5	...	Caucasus .	H.R.H. le Duc d'Orleans.
40⅝	6⅞	(single	horn)	8	...	Crimea .	British Museum.
40⅝	8	26¾	28¾	7+9	...	Carpathians .	Count Potocki, Paris Museum.
40½	5⅜	22¼	32½	6+6	...	Ak Dagh, Asia Minor	H. O. Whittall.
40¼	5½	23¾	31¾	5+5	...	...	Hume Collection, British Museum.
40	5½	25	31	6+5	...	Maralbashi .	E. L. Phelps.
39⅞	5¾	...	...	7+7	...	...	Sir Edmund G. Loder, Bart.
39¾	5¾	33	36¼	5+6	...	Ak Dagh, Asia Minor	F. C. Selous.
39¼	6	30	33½	6+5	...	Caucasus .	St. George Littledale.

THE MARAL or CARPATHIAN STAG (Cervus maral)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Weight.	Habitat.	Owner.
$39\frac{1}{4}$	$5\frac{3}{4}$	$16\frac{1}{2}$	$28\frac{3}{4}$	6 + 6	.	Maralbashi .	David Hanbury.
$37\frac{1}{4}$	5	24	29	7 + 7	...	Caucasus .	H.R.H. le Duc d'Orleans.
$35\frac{1}{8}$	$5\frac{1}{2}$	$19\frac{3}{4}$	26	5 + 5	...	Do. .	Hume Collection, British Museum.
$34\frac{3}{4}$	$5\frac{3}{4}$	$20\frac{1}{4}$	$27\frac{3}{4}$	7 + 8	...	Do. .	H.R.H. le Duc d'Orleans.
34	$5\frac{1}{2}$	34	...	5 + 5	...	Do. .	Do.

Mr. F. C. Selous said his fine stag scaled 32 st. 9 lbs. clean, and a large amount of blood lost, would have brought him up to 33 stone. He was in low condition (it being the end of the rutting season) and old.

Stoke Park Red Deer Head.



WAPITI (Cervus canadensis).

WEIGHT from 700 to 1000 lbs. HEIGHT at shoulder about 16 hands.

Distribution—North America, the Alleghany regions of Pennsylvania and Virginia, Northern Wisconsin (?), Minnesota, Dakota, Nebraska, Washington, Oregon, and California. 57° N. is its northern limit.

Length on outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
*73·69	9·8½	(come together) 36 inside	42 outside	11 + 10	Oregon . .	Major-General Sir William Crossman, K.C.M.G.
65	7⅝	48	...	...	Wyoming . .	Messrs. Schoverling, Daly and Gale.

* Lengths of two Horns.

WAPITI (Cervus canadensis)—*continued.*

Length on outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
–64¼	8	... ...	48	7+7	N.W. Wyoming	A. Rogers.
–63¾	8¼	49¼	48½	7+9	North Prong .	Frank Cooper.
62	7¾	33¼	50⅝	7+7	Snake River, Colorado	Ernest Farquhar.
61½	7½	...	45	6+7	Western slope of the Bighorn Mountains, Wyoming	Do.
60¾	7⅞	...	52	6+6	Rocky Mountains	W. A. Baillie-Grohman.
60⅜	7¼	43	46¼	6+6	Wyoming . .	Major C. C. Ellis.
60½	8¼	...	55	7+6	Do. . .	E. Grant.
–59¾	13	(round burr)	...	...	Do. . .	The late Sir Samuel Baker, Bart.
59½	8½	37¼	47	8+7	Nebraska . .	Lieut.-Gen. Hankey.
59½	7½	...	45	6+6	Medicine River District, Wyoming	H. Seton-Karr.
58¾	7¾	36¼	47	9+8	Wyoming . .	Viscount Powerscourt.
58½	9	...	46½	10+7	Do. . .	Hon. T. A. Brassey.
–58½	8½	...	44½	6+6	Do. . .	J. D. Cobbold.
57½	6⅞	24¼	35⅝	6+6	Montana . .	Captain Abdy.
57⅜	7	47	48⅝	6+6	Wyoming . .	Hon. Charles Ellis.
57¼	9⅝	32	42¼	7+7	Do. . .	Sir Humphrey de Trafford, Bart.
57	7⅞	61	49	8+8	Do. . .	Sir Edmund G. Loder, Bart.
57	7⅛	35⅛	41⅛	6+6	Yellowstone Park	British Museum.
–56½	6⅞	...	46⅜ outside	6+6	Two Ocean Pass	Theodore Roosevelt.
56	7¼	35	43½	7+8	Saskatchewan District	Earl of Ava.
55⅝	7⅝	43¼	48⅛	7+7	Wyoming . .	Hon. Charles Ellis.
–55½	7½	...	48¾	8+7	...	Otho Shaw.
55½	6½	44	45½	6+6	...	A. H. Pollen.
–55½	12½	...	41½	13	...	Viscount Powerscourt.
55⅜	7⅛	46¼	...	6+7	...	St. George Littledale.

WAPITI (Cervus canadensis)—*continued.*

Length on outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
55⅝	7	43½	47⅝	6+5	Wyoming .	G. D. White.
55	8¼	...	41¼	6+6	Do. .	Major Maitland Kirwan.
55	7⅛	...	47½	6+5	Do. .	E. N. Buxton.
55	8	...	45½	7+6	Do. .	Major Maitland Kirwan.
55	8	...	41	7+7	Do. .	Rowland Ward.
-55	8⅛	...	41¼	6+6	...	A. Pendarves Vivian.
55	6½	...	...	6+6	Colorado . .	Crawford E. Logan.
54¾	6½	29½	38⅞	6+6	Wyoming .	The late J. S. Jameson.
54¾	6¾	39⅜	43½	6+6	Montana . .	Count Felice Scheibler.
54½	8	37	45½	6+6	Wyoming .	Sylvester Browne.
54½	...	...	...	14	Elk Head Mountain, Colorado	Sir Peter Walker, Bart.
54½	8	34¼	45½	6+5	Wind River, Wyoming.	Lieut.-Col. the Hon. W. Coke.
54½	9	...	...	11+7	Wyoming .	G. Wrey.
54⅜	6½	38⅜	44¼	7+6	Buffalo Fork .	E. N. Buxton.
-54¼	8	...	43½	10+10	Montana .	W. A. Tulloch.
54¼	7⅝	49⅞	...	7+9	Wyoming .	Hon. Walter Rothschild.
54	7⅝	30¾	37⅜	...	Do. .	E. G. Verschoyle.
-54	...	...	50	...	...	Sir G. Gore.
54	7¼	...	48	7+8	...	Earl of Rosslyn.
54	7¼	...	48	7+8	Wyoming .	Moreton Frewen.
53½	7	41½	42	7+7	Colorado .	E. J. Logan.
53⅛	7⅜	47	49¾	8+7 (palmated)	Little Snake River, Wyoming	Ford G. Barclay.
-53	12½	(round burr)	...	...	Wyoming .	The late Sir Samuel Baker, Bart.
53	9	35	46	18	Do. .	H. L. Duff.
53	7¼	41	43½	6+6	Do. .	Major H. J. Ferguson.
-52¾	7¾	38½	41¾	6+5	Do. .	Chas. Makin.

WAPITI (Cervus canadensis)—*continued.*

Length on outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
52½	7½	39	43	6+6	Wyoming .	Rowland Ward.
52½	6½	...	34¾	7+6	Do. .	Ford G. Barclay.
52½	6½	39	42	6+6	Do. .	G. D. White.
52⅜	5¾	49⅜	...	6+5	North Park, Colorado .	Col. Ralph Vivian.
52	8½	...	...	6+6	Wyoming .	Hon. F. Thellusson.
52	6¾	29¼	36¼	6+5	Colorado .	T. C. E. Goff.
-52	7½	46½	...	6+6	...	Dublin Museum.
52	6¾	38¼	41	6+6	Wyoming .	G. D. White.
51¾	8½	51	52½	6+7	Do. .	J. Boscowitz.
51½	7¼	42	46½	6+6	Do. .	E. G. Verschoyle.
-51⅜	8¼	(spread)	50	...	Do. .	G. O. Shields.
51	7¼	30	35	7+7	British Columbia	J. Turner-Turner.
51	6¼	39	45	6+6	Colorado .	E. G. Verschoyle.
50⅝	7⅜	42	48¼	7+7	North Park, Colorado .	Col. Ralph Vivian.
50½	6¼	41½	47½	7+6	Wyoming .	Lieut.-Col. the Hon. W. Coke.
50½	7½	35	41	6+6	Do. .	H. S. Somerset.
50½	6	...	...	12	Do. .	E. F. Heneage.
50	7¾	54	spread	...	...	M. P. Grace.
-50	13¼	...	63 outside	14	Do. .	Viscount Powerscourt.
50	...	...	49	8+7	Do. .	Otho Shaw.
50	9½	15½ (round burr)	49	8+6	Do. .	Do.
50	11	...	...	13	Montana .	T. W. H. Clarke.
-50	12	52	33	6+7	...	H.R.H. Duke of Saxe-Coburg and Gotha.
50	7⅛	...	47½	6+6	...	J. M. Hanbury.
-50	12½	43	35	7+6	Wyoming .	W. A. Baillie-Grohman.
50	7	30½	39	6+5	Washington Territory .	P. B. Vander Byl.
-49⅞	6¾	33⅝	45	6+6	...	H.R.H. Duke of Saxe-Coburg and Gotha.

WAPITI (Cervus canadensis)—*continued.*

Length on outside curve.	Circumference between bez and trez tines.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
49½	7⅜	45¼	45¼	7+7	...	H.R.H. le Duc d'Orleans.
49½	8	...	43	11+8	Bighorn Mountains, Wyoming	Otho Shaw.
49⅜	7⅝	38⅞	...	10+15	...	Moreton Frewen.
49⅛	6¼	...	45¼	13	Montana .	W. A. Fordham.
-49¼	9¾	28	36¼	7+7	Canada . .	Paris Museum.
49¼	8¾	38½	41½	6+6	Montana .	L. B. Lee.
49	6½	48½	51	8+7	Wyoming .	Gathorne Hardy.
48½	8⅜	31½	34½	6+7	Do. .	Hon. Chas. Ellis.
-48¾	11	27⅝	32¾	7+7	Canada . .	Paris Museum.
48	11½	...	...	17	Montana .	T. W. H. Clarke.
47¼	5¾	48	42	8+6	Colorado .	E. J. Logan.
47⅛	7¼	40	41	7+7	Wyoming .	Sir Victor Brooke's Collection.
46½	8½	55	40	10+11	Do. .	Mrs. Hugh Peel.
46½	6¼	28½	36	6+6	Wyoming .	Hugh Peel.
46¼	6	39	39¼	6+6	Montana .	R. H. Sawyer.
45¾	7	...	43¼	7+7	Do. .	Thomas Bate.
45⅝	7	33½	33¾	11+9	Wyoming .	Hon. Charles Ellis.
45½	7¾	39½	41	6+6	Do. .	Gerald Hardy.
44½	6½	27¾	31¾	7+7	Do. .	F. J. Horniman.
44	7	...	32½	6+7	Do. .	Lord Stradbroke.
44	6½	30½	31½	6+6	Do. .	Lord Grantley.
41	7¼	37	35	11+8	Vancouver Is.	Admiral J. R. Kennedy.

Drawn from a specimen shot by J. G. Apcar in Kashmir.

KASHMIR STAG or BARASINGH (Cervus cashmirianus).

Described first by Dr. H. Falconer, from a specimen obtained in the valley of Kashmir.

This stag, the Hangal of Kashmir, is closely allied to the Red Deer, but in most specimens the bez tine is longer than the brow tine, unlike the usual growth of Red Deer horns.

HEIGHT at shoulder—One shot in Kashmir by Lieut.-Col. Wade-Dalton measured 51 inches.

Distribution.—The Kashmir Valley throughout the pine forests between about 9000 and 12,000 feet in summer, lower in winter. Not found east or north of Kashmir; a few occur in Wardwan, Kishtwár, Badrawár, etc., none in Ladak (W. T. Blanford).

KASHMIR STAG or BARASINGH (Cervus cashmirianus) *continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
–48	...	...	...	...	...	Dr. Leith Adams.
–47	...	...	...	. .	...	Major A. E. Ward.
–47	7⅝	21	36	7+5	Kashmir . .	Bombay Natural History Society's Museum.
47	6¼	30	35½	8+8	...	Duke of Wellington.
45⅞	8	35	41	6+6	...	Hume Collection, British Museum.
45⅝	6	25¾	36	8+8	Kashmir . .	Sir Victor Brooke's Collection.
45	6¾	19	34	6+6	Do. . .	Col. R. Pole Carew.
44¾	7	20	43	5+5	Lidar Valley .	Officers' Mess, Q. O. Corps of Guides.
44⅝	8½	31½	44¾	5+5	Kishenganga Valley	Do.
–44	7¼	30¾	40⅞	5+5	Sindh Valley, Kashmir	P. H. G. Powell Cotton.
44	6	27	36	5+5	Do.	Hon. Walter Rothschild.
43⅞	5⅞	15⅞	32	5+5	Do.	The Hon. Charles Ellis.
43⅜	6½	25⅜	36½	...	...	Do.
43	5⅞	26⅛	37⅞	6+5	Kashmir . .	Martyn Kennard.
42	4½	13¼	29¼	5+5	Do. . .	Duke of Bedford.
41⅜	5¾	23¾	33	5+5	Palgam District, Kashmir	R. Lydekker, British Museum.
41¼	5¼	34	49	6+5	Kashmir . .	C. H. Seely.
41¾	5¾	23½	35	5+5	Do. . .	Major Kingsley Foster.
40½	5⅜	31½	39½	6+5	Sindh Valley .	F. W. H. Walshe.
40½	6½	15½	28	5+5	Do. .	Sir Robert Harvey, Bart.
40¼	7⅜	24½	37½ (out)	5+5	Sindh Valley .	Lieut. H. W. Codrington.
39	5⅛	17½	29½	6+5	Kashmir . .	Sir Victor Brooke's Collection.
37½	5⅝	26¾	34½	6+6	Kashmir Valley	Major C. S. Cumberland.
36¼	5½	30¼	35	5+5	Kashmir . .	E. L. Phelps.
37⅞	5¾	19¼	28¾	8+7	Do. . .	The Hon. Charles Ellis.
37	5¾	19½	31½	5+5	Do. . .	J. G. Apcar (see illustration).
36	5¾	26¾	32½	5+4	Do. . .	E. L. Phelps.

KASHMIR STAG or BARASINGH (Cervus cashmirianus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
35½	6	40½	36	6+5	Kashmir . .	Col. F. C. Lister-Kay.
34	5⅛	21½	29	5+5	Do. . .	E. Langworthy.
–34	7	20½	26	5+5	Do. . .	Dublin Museum.
34	5½	14¾	25½	5+5	Do. . .	N. C. Taylor.

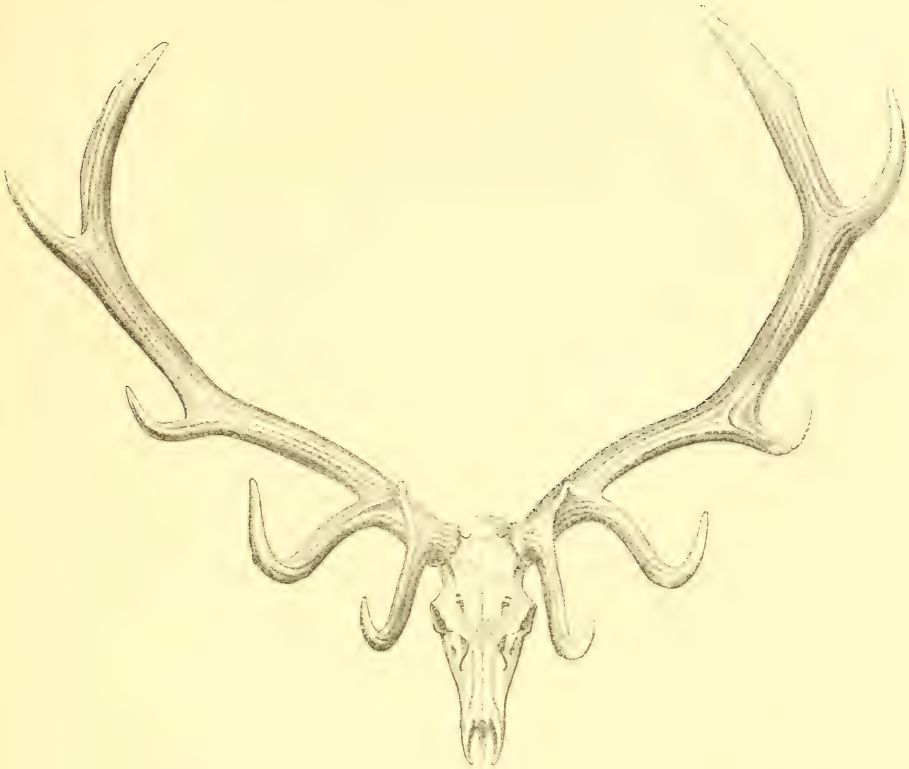
LHASA STAG (Cervus thoroldi).

Shot by Dr. W. G. Thorold about 200 miles to the north-east of Lhasa, recently described by Mr. Blanford; differs from other forms of deer, except the Barbary deer, in the absence of a bez tine. Type in British Museum.

HEIGHT at shoulder about 4 feet.

Distribution—Central Tibet.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
38½	4⅝	37	27	5+4	Central Tibet .	Hon. Walter Rothschild.
38	5¼	...	...	5+5	Do. .	British Museum.



Drawn from a specimen in the Hume Collection.

SHOU or TIBETAN STAG (Cervus affinis).

This is one of the largest deer in Southern Asia, standing sometimes 15 hands, and closely approaches the American Wapiti in the measurements of the horns.

Distribution—Eastern Tibet.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
$55\frac{3}{4}$	$6\frac{1}{2}$	$17\frac{1}{4}$	$40\frac{3}{8}$	7+6	...	A. O. Hume, Private Collection.
–55	...	...	...	6+7	...	Earl Northbrook.
$54\frac{3}{8}$	$6\frac{5}{8}$	$21\frac{5}{8}$	$37\frac{1}{4}$	5+5	India .	Dr. Campbell, British Museum.

SHOU or TIBETAN STAG (Cervus affinis)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
53¾	6⅞	26⅛	44	5+5	Nepal	B. H. Hodgson, British Museum.
53¼	6⅞	30 (see illustration)	45¾	4+5	...	Hume Collection, British Museum.
–53	9	...	40	5+5	Darjeeling	Col. H. C. B. Tanner.
52	8	...	...	...	...	Hon. Walter Rothschild.
49½	7½	38	45½	5+5	...	Col. J. Biddulph.
48⅞	6½	19⅜	38⅛	5+7	...	Sir Edmund G. Loder, Bart.
47⅞	5⅝	30⅜	40½	5+5	North India	British Museum.
43¾	5⅞	20⅛	35	6+5	...	A. O. Hume, Private Collection.
42¾	5⅞	23⅝	31¼	5+5	Nepal	British Museum.
40½	5	39¼	41	5+5	North India	B. H. Hodgson, British Museum.
39¾	5⅜	20	31¼	5+5	...	Edward Tennant.

THIAN SHAN STAG (Cervus eustephanus).

HEIGHT at shoulder about 6 feet.

Distribution—North-West frontier of Eastern Turkestan.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
–51	10 9/10	...	..	...	Kashgar	W. T. Blanford.
–49⅜	8	41	42⅛	7+7	East Thian Shan	Paris Museum.

FALLOW DEER (Cervus dama).

WEIGHT about 140 lbs. clean.

7 years old,	135 lbs.	without head,	inside,	or skin	Lord Mowbray and Stourton, Allerton Park.
6 „	148 „	„	„		
9 „	139 „	„	„		

Distribution—In their wild state Sardinia, Spain, and some of the islands of the Grecian Archipelago, from these countries introduced to Central Europe.

Length on outside curve.	Circumference.	Tip to Tip.	Spread inside.	Points.	Width of Palm.	Habitat.	Owner.
37¼	5¼	20	22½	11+13	7	Ashton Park, Lancashire	J. Whitaker.
30	4¾	23½	26½	10+9	4½	Drummond Castle, Perth	J. G. Millais.

FALLOW DEER (Cervus dama)—*continued.*

Length on outside curve.	Circumference.	Tip to tip.	Spread inside.	Points.	Width of Palm.	Habitat.	Owner.
–29½	5	17	28½	14 + 13	7¼	Petworth Park, Sussex	J. G. Millais.
–29	4⅛	30½	24⅛	1[illegible] + 11	5½	Asia Minor . .	F. E. Whittall.
–28½	4	14½	26	10 + 11	6	Woburn (dressed, 165 lbs.)	Duke of Bedford.
–27¾	5	20½	21½	13 + 7	5¾	Colebrooke (seven years old)	A. Basil Brooke.
27¼	4	23	...	10 + 8	...	England . .	J. Carr Saunders.
26⅞	3¾	12	17½	7 + 10	...	...	British Museum.
26½	4¼	23½	20½	7 + 9	5⅞	Perthshire . .	A. Basil Brooke
–26	5	20¾	2[illegible]¾	10 + 10	4½	Tasmania . .	T. W. H. Clarke.
25½	...	...	26	...	5¼	England . .	Rowland Ward.
25⅜	4¼	26	...	8 + 8	5⅛	Ireland . .	Sir Victor Brooke's Collection.
–25	4	24¾	25¾	11 + 10	5¾	Tasmania . .	T. W. H. Clarke.
–25	4½	21½	24	11 + 10	7	England . .	Sir Edmund G. Loder, Bart.
23	4½	15	18½	9 + 10	5	...	Dublin Museum.
21¼	3⅝	14½	...	[illegible] + 7	...	Asia Minor . .	Paris Museum, Père R. David.
21⅜	4⅜	...	...	11 + 10	5	Colebrooke Woods, Ireland	Sir Victor Brooke's Collection.

IRISH ELK (Cervus giganteus)—Blun.

(*Extinct.*)

HEIGHT of animal, 6 feet to 6 feet 6 inches.

DIMENSIONS OF HORNS OF IRISH ELK IN SCIENCE AND ART MUSEUM, DUBLIN.

	(1) ft.	(1) in.	(2) ft.	(2) in.
Distance between tips of antlers in a straight line	9	2	11	6
Distance between tips of antlers measured by the skull	11	10	13	9
Greatest width of palm	1	10½	1	5½
Circumference above burr	0	10¼	0	10
Points exclusive of those or brow tines	9	9	11	10

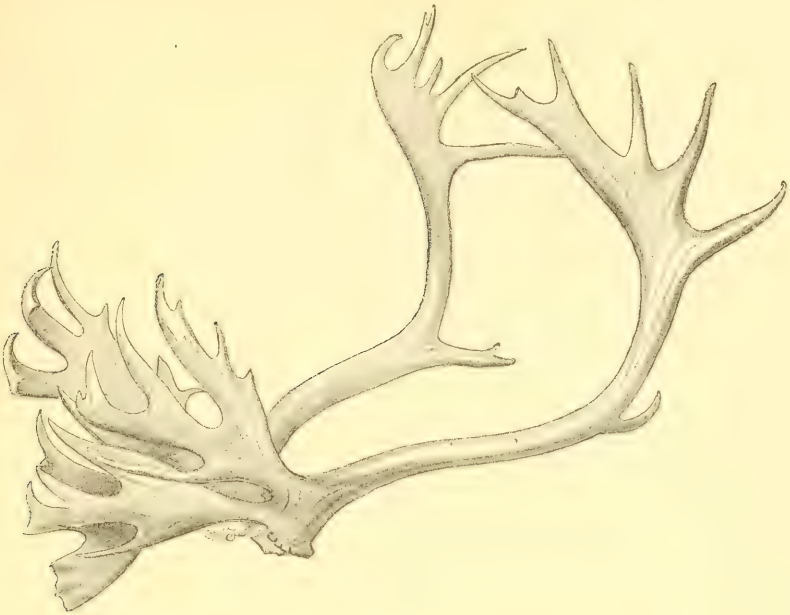
No. (1) Specimen presented to the Museum by Archdeacon Maunsell. From Rathcannor, County Limerick.

No. (2) Specimen presented by the Marquis of Bath. From Lough Naglack, near Carrickmacross, County Monaghan.

IRISH ELK (Cervus giganteus)—*continued.*

Spread Tip to Tip.		Length round inside of horn.		Circumference above burr.	Width of Palm.	Points.	Owner.
ft.	in.	ft.	in.				
–11	6	(see over)		...	...	...	Dublin Museum.
–11	3	7	$5\frac{1}{2}$	$12\frac{1}{4}$	$19\frac{1}{4}$	17	Mrs. Donaldson-Hudson.
10	2	5	$8\frac{1}{2}$	$9\frac{7}{8}$	$19\frac{1}{4}$	19	British Museum.
9	8	...		...	...	...	Hon. Walter Rothschild.
–9	6*	...		$14\frac{1}{2}$	23	...	Viscount Powerscourt.
9	5	6	0	$13\frac{1}{2}$	$21\frac{1}{8}$	13+15	Sir Edmund G. Loder, Bart.
–9	2	13	6	...	$15\frac{1}{2}$	...	Mrs. Graham Lloyd.
		(of both horns)					
8	$11\frac{3}{4}$	6	$1\frac{3}{8}$	$8\frac{3}{4}$	$17\frac{3}{4}$	10+13	Hon. Charles Ellis.
–8	10	12	10	...	$13\frac{1}{2}$	...	Mrs. Graham Lloyd.
		(of both horns)					
7	6	5	$3\frac{1}{2}$	$8\frac{5}{8}$	...	10+11	Sir Victor Brooke's Collection.

* Twelve feet five inches from highest point on one horn to same on other measured across top of skull. Length of one horn 6 feet 7 inches.



REINDEER or CARIBOU (Rangifer tarandus).

HEIGHT at shoulder, 4 feet 10 inches (Newfoundland)—General R. L. Dashwood. WEIGHT of a full-grown Norwegian Reindeer, 30 stone clean—Abel Chapman. Horns average about 30 lbs.

Distribution.—Arctic regions of Europe, Asia, and North America; New Brunswick, Nova Scotia, and Newfoundland, where it is supposed by Dr. Caton to cross on the ice to the Continent. From Lake Superior it extended westward to the Pacific coast, and west of the barren grounds the range extends northwards to the limits of the Continent. In the northern parts of Montana and Washington territories, as well as in British Columbia (J. E. Harting).

Length round outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
62	$5\frac{1}{2}$	39	$49\frac{1}{4}$	20+17	Canada . .	Mrs. Macintosh.
60	$5\frac{5}{8}$	$38\frac{5}{8}$	$41\frac{1}{8}$	15+22	...	Sir Victor Brooke's Collection.
$-59\frac{1}{2}$	7	38	44	15+16	...	J. Whitaker.

REINDEER or CARIBOU (Rangifer tarandus)—*continued.*

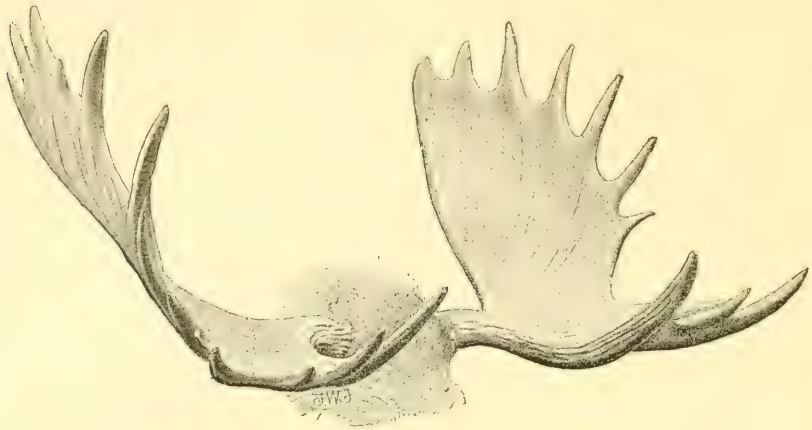
Length round outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
57⅝	5¼	13⅜	...	13 + 7	Arctic Regions .	British Museum.
57¼	5¼	33½	44½ (outside)	16 + 20	Do. .	Sylvester Browne.
–54⅜	4⅞	20¼	...	11 + 13	North America .	Capt. Sir J. Franklin, British Museum.
–54	6¾	21¼	32¾	11 + 12	...	Paris Museum.
54	5	22	41¾	16 + 11	Norway . .	Kenneth M'Douall.
51⅜*	4⅞	40⅞	48⅜	17 + 14	Hudson Bay .	Sir Edmund G. Loder, Bart.
–51	5¼	29	...	21	Norway . .	Abel Chapman.
50⅜	4⅞	24	29 (outside)	13 + 16	...	H.R.H. Duke of Saxe-Coburg and Gotha.
49	4⅛	24⅝	32⅜	7 + 9	...	Hon. Walter Rothschild.
48†	6½	11⅞	25½	15 + 17	Newfoundland .	Sir Edmund G. Loder, Bart.
47⅜	5⅛	32⅛	...	12 + 19	North America .	A. Murray, British Museum.
♀47	4⅝	23	29	17 + 9	Norway . .	Kenneth M'Douall.
–46½	6	21½	26½	37	Do. . .	Hon. Walter Rothschild.
46½	6	16½	28	30	British Columbia .	J. Turner-Turner.
44⅜	55⅛	34	37	...	Newfoundland .	C. H. Akroyd.
–44	5½	18¼	30	13 + 18	Do. .	Admiral J. R. Kennedy.
43¾	5⅜	40	41⅞	16 + 11	Do. .	St. George Littledale.
–42½	7¼	33¼	38½	18 + 22	Do. .	R. Gordon Smith.
–42½	(greatest width)		49⅛	24	Do. .	General R. L. Dashwood.
42	6½	...	18½	33	Alaska . .	Earl of Lonsdale.
42	5½	36½	39½	20 + 12	Newfoundland .	Q. C. Colmore.
41⅛	4¾	...	24½	12 + 9	Spitzbergen . .	W. D. James.
41	5½	20½	28	15 + 9	Newfoundland .	Lieut.-Col. the Hon. W. Coke.
41	6	35	33	20	Canada . .	Major C. C. Ellis.
–40½	4½	29	30	8 + 11	Norway . .	Lewis J. Cadell.
40	6	31½	35½	19 + 14	Newfoundland .	Admiral J. R. Kennedy.
39	5⅝	...	23¼	14 + 17	Do. .	Sir Victor Brooke's Collection.

* Woodland Caribou. † Barren ground.

REINDEER or CARIBOU (Rangifer tarandus)—*continued.*

Length round outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
39	6	31	30½	10+15	Newfoundland .	Capt. C. E. Stracey.
39	7	28	31	20+19	Do. .	Admiral J. R. Kennedy.
♀39	5¾	...	...	11+11	British Columbia	Sir Peter Walker, Bart.
–39	7⅝	33	31⅞	29+22	Newfoundland .	Lord Thurlow.
38¾	4	25¼	...	7+5	Norway . .	W. J. Ingram, British Museum.
38	5½	21½	...	15+13	Do. . .	W. H. Ingram, British Museum.
37¾	6¼	23	23	11+10	British Columbia	W. S. Power.
37½	5½	...	29	...	...	Otho Shaw.
37¼	5⅝	...	24	27	Newfoundland .	Dr. Wm. Tait.
37	5¾	21½	25	12+12	British Columbia	H. G. Walker.
–37	4¼	18 (widest outside)	20½	15+11	E. Spitzbergen .	Arnold Pike.
37	...	40	...	43	Newfoundland .	General R. L. Dashwood.
36½	6⅛	26⅛	28½	17+15	British Columbia	Sir Peter Walker, Bart.
36½	5½	28	25	8+9	Do.	H. G. Walker.
36	4¼	24	26	17+11	East Spitzbergen	Arnold Pike.
–36	6½	34	33½	23+20	Lapland . .	Dublin Museum.
–34½	6¾	31	...	33	Norway . .	Abel Chapman.
♀33½	5¼	23	26	15+11	British Columbia	Sir Peter Walker, Bart.
–32	5½	...	...	14	Kootenay, British Columbia	Theodore Roosevelt.
30¼	4¼	19	23½	7+9	Newfoundland .	St. George Littledale.

This is probably one of the most difficult heads to measure, on account of the great variety of the curves of the horns. It is a matter of contention amongst many sportsmen as to whether these are not three distinct varieties, Reindeer, Caribou, and Woodland Caribou, but naturalists generally agree in referring to them all as *Rangifer tarandus.*



MOOSE (Alces machlis).

Season in Norway, 1st August to 31st September, subject to local modifications.

Horns, weight about 60 lbs. Scandinavian, 5 feet 9 inches at shoulder (Sir Henry Pottinger, Bart.). HEIGHT, Canadian, 6 feet 6 inches (General R. L. Dashwood). WEIGHT, 900 to 1400 lbs.

Distribution—Northern Russia, Siberia, and Northern China; Scandinavia, Eastern Prussia (Lithuania), Alaska, Montana, Nova Scotia, and New Brunswick.

* Length to longest tine on inside curve.	Circumference above burr.	Tip to Tip.	Greatest width.	Breadth of Palm.	Points.	Habitat.	Owner.
–44	...	...	61½	...	...	Canada .	General R. L. Dashwood.
–43¼	8½	40	59¼	14½	13+14	Manitoba .	G. H. M. Banks.
–42¾	10	35¾	56	13¼	11+12	N. America	T. W. Wood, Jun.
...	...	...	67	...	...	Nova Scotia	Peter J. Cope.
–41	8½	...	...	21¾	27	Chesincook, M. E.	Col. Hoselton.
–41	...	...	54½	...	12+11	Canada .	General R. L. Dashwood.
–41	...	...	65~	24	13+14	Manitoba .	Otho Shaw.
40	8	35	55½	13	12+11	Maine .	J. S. Braithwaite.

* Moose horns should be measured from burr through the centre of palm to highest point.

MOOSE (Alces machlis)—*continued.*

Length to longest tine on inside curve.	Circumference above burr.	Tip to Tip.	Greatest width.	Breadth of Palm.	Points.	Habitat.	Owner.
39⅞	6½	...	51⅜	15¾	12+13	N. America	British Museum.
39½	8½	...	39½	13¾	...	Do.	Otho Shaw.
39½	7	38	54½	16	12+13	Canada .	Sylvester Browne.
39½	7¾	37	56½	13½	14+11	British Columbia	Sir Peter Walker, Bart.
39¼	7⅝	33½	49⅛	11½	10+12	N. America	J. Carr Saunders.
39⅛	7⅝	36¼	51¾	9½	7+ 8	Eastern slopes of the Rockies	J. C. L. Knight Bruce.
39	8¼	38½	57	12½	15+12	N. America	Sir Edmund G. Loder, Bart.
38½	7	...	52⅞	10⅞	10+11	Do.	British Museum.
–38½	8½	36¼	51¾	15¼	10+10	Norway .	Captain Gerard Ferrand.
38¼	6⅛	34	49½	9¾	9+ 9	N. America	Sir Victor Brooke's Collection.
38	7⅝	30½	47	12	12+12	British Columbia	Sir Peter Walker, Bart.
38	6½	...	59¼	9¾	11+11	...	H.R.H. Duke of Saxe-Coburg and Gotha.
38	8	21½	57½	14	18+15	...	C. H. Akroyd.
37¾	8	...	51½	11¼	14+13	N. America	F. Ashby.
37¾	8	35⅜	57¾	11½	11+13	Norway .	Thomas Bate.
37½	...	...	49½	20	...	Canada .	Rowland Ward.
37½	8½	49½	...	11	21	...	Ernest Farquhar.
37¼	7⅛	35	50⅝	11⅝	13+10	New Brunswick	Hon. Charles Ellis.
37¼	6⅞	...	43¾	8¾	11+ 9	N. America	British Museum.
–35½	8¼	42 1/16	...	...	9+10	Canada .	Paris Museum.
34½	6⅝	...	51½	9⅜	11+12	N. America	British Museum.
34¼	6⅝	42	51⅛	9½	10+ 9	Canada .	G. Marchetti.
–33½	7	28	44	11	13+13	N. America	Dublin Museum.
–33	9	34	35	...	9+10	E. Prussia	H.R.H. Duke of Saxe-Coburg and Gotha.
32½	7	29¼	44	8	9+11	N. America	Charles Makin.
32½	7½	33	43	11½	10+10	Sweden .	Captain Gerard Ferrand.
32	6	...	43⅜	9½	7+ 8	Russia .	Sir Edward Caley, British Museum.

MOOSE (Alces machlis)—*continued.*

Length to longest tine on inside curve.	Circumference above burr.	Tip to Tip.	Greatest width.	Breadth of Palm.	Points.	Habitat.	Owner.
–31¾	7	...	...	...	14	N. America	A. Rogers.
31½	...	...	51½	12½	...	Alaska .	Earl of Lonsdale.
30½	8	27	40½	9½	7+10	Norway .	Colonel G. D. F. Sulivan.
30⅛	7⅛	29½	44¼	10	8+9	...	Sir Victor Brooke's Collection.
–30	5½	...	40½	13	22	Montana .	Theodore Roosevelt.
29	6	30½	42½	7½	9+11	Norway .	Sir H. Pottinger, Bart.
29	6½	31½	39½	6½	9+10	Do. .	Do.
29	7½	...	43½	10½	24	Do. .	Sir Peter Walker, Bart.
28¾	7⅜	35	49⅞	12½	11+11	New Brunswick	Hon. Charles Ellis.
28½	7½	24⅜	42	9½	10+9	Norway .	Sir H. Pottinger, Bart.
27	5⅞	28	42	6¾	6+7	Eastern slopes of the Rockies	Hon. F. Thellusson.
26½	6¼	25	38	6	7+9	Russia .	Lieut.-Col. the Hon. W. Coke.
–26½	6½	...	46	15	...	Norway .	Abel Chapman.
26½	6¾	30	40	6	6+6	North of Manitoba	P. B. Vander Byl.
26⅛	6½	...	39⅜	6⅞	5+4	S. Russia .	British Museum.
26	6	27¼	42½	7	6+7	Norway .	Lord Delamere.
23½	5¾	...	35¾	5	5+3	Tydal .	E. N. Buxton.
23	6	27½	36	6	7+6	Sweden .	Sir H. Pottinger, Bart.

Body Measurement of a full-grown Scandinavian Elk over Seven years old.

Length from tail to nose, 7 feet 3 inches; length from crest to nose, 2 feet 5 inches; height at withers, 5 feet 9 inches; height at quarters, 5 feet 6 inches; belly to ground, 3 feet 4 inches; greatest girth, 6 feet 10 inches; round thigh, 3 feet; round forearm, 1 foot 11 inches; weight about 1400 lbs. (Sir Henry Pottinger, Bart.)

ROE DEER (Capreolus caprea).

HEIGHT at shoulder about 25 inches.

Distribution—Europe and Western Asia (Northern Persia).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–13	6½	3½	Saxe-Coburg and Gotha	H.R.H. Duke of Saxe-Coburg and Gotha.
–13	7	4	Do.	Do.
–13	6	3½	Saxe-Coburg . .	Do.
12¾	3½	12¾	Austria . . .	Sir Edmund G. Loder, Bart.
–11¼	6	6	Perth	J. G. Millais.

ROE DEER (Capreolus caprea)—*continued.*

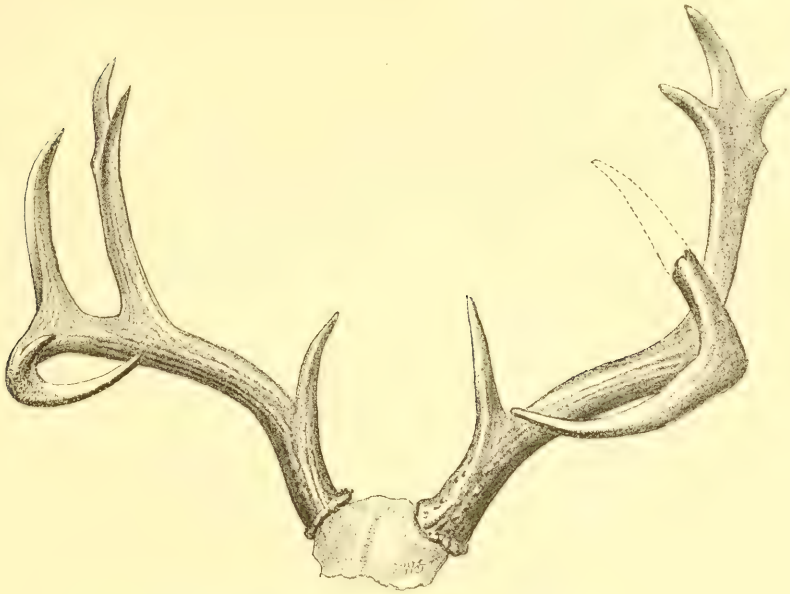
Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–11⅛	4¾	...	Scotland . . .	Duke of Bedford.
–11⅛	4½	(single horn dug up)	Do. . . .	J. G. Millais.
–11	7¼	7½ (burr)	Ross	H. M. Warrand.
10¼	3½	5¾	Inverness . . .	C. Macpherson Grant.
10	2¼	4½	Ross, N.B. . .	Sir Edmund G. Loder, Bart.
9⅞	3¾	5¾	Kirdel's Wood, Inverness	Sir Victor Brooke's Collection.
–9¼ *	5½	5	Castle Grant, N.B. .	J. G. Millais.
9	4	4½	Scotland . . .	Rowland Ward.
9	3	6½	Banff	H. Brinsley-Brooke.
8½	3 (malformed)	5⅞	Nairnshire . . .	Earl Cawdor, British Museum.
8½	3	4½	France . . .	British Museum.
–8½	4⅛	3	Scotland . . .	C. V. A. Peel.

* This is a remarkable head, but measurements do not show it. It was killed by Mr. J. Corballis in Sawmill Wood, Beaufort, and the late Lord Lovat, who probably saw more dead roe in his life than any individual shooter, said that it was by far the best he had ever seen (brow points 4⅛ and very thick).

SIBERIAN ROE DEER (Capreolus pygargus).

Distribution—Siberia.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
15	4¾	...	Siberia . . .	Sir Edmund G. Loder, Bart.
–14 3/16	3 15/16	...	Environs, Issak Kul., Siberia	Paris Museum, Mr. Chaffanyon.
13¾	3	6	Asia	British Museum.
–13⅜	3 15/16	9½	Siberia . . .	Paris Museum.
13¼	4	8⅞	South Mantchuria .	H. E. M. James, British Museum.
12	4½	8	Siberia . . .	Rowland Ward.
11⅜	4	8⅛	China . . .	British Museum.



Drawn from a specimen in the British Museum.

VIRGINIAN or WHITE-TAILED DEER (Cariacus virginianus).

WEIGHT about 150 lbs. HEIGHT at shoulder about 24 inches.

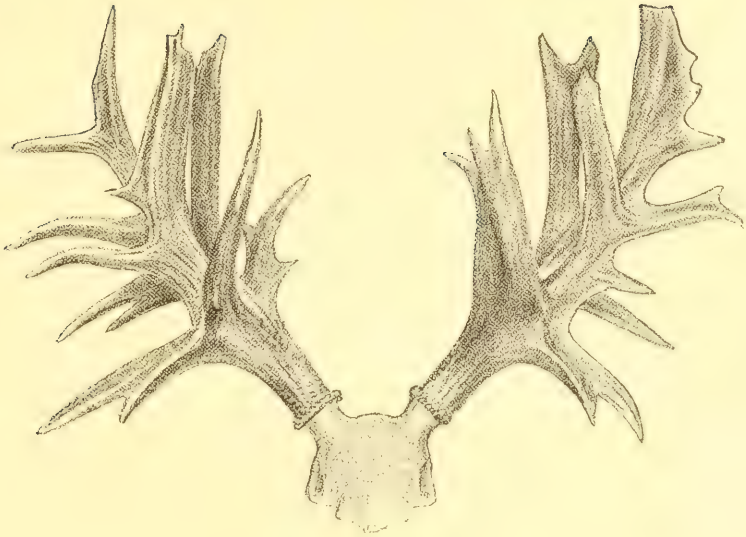
Distribution—North America from the Atlantic to the Pacific, extending into British Columbia in the North, and Mexico in the South.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
27⅝	5⅜	(single horn)	...	16	North America	British Museum.
27⅛	4⅜	14¼	19	6+6	Do.	Do.
25¾	4½	9	19	11	Near Calais, Maine, U.S.A.	H. S. Wellcome.
25⅜	4⅝	10⅜	19	13+15	Texas . .	Capt. F. Cookson.
25¼	4¾	12⅞	17⅛	11+9	North America	British Museum.
24½	4½	12⅜	18½	6+6	Do.	J. Carr Saunders.
24½	4⅛	11⅛	19½	6+6	Do.	British Museum.
–24	4⅝	19½ (spread)	...	18	Nebraska . .	G. B. Grinnell.

VIRGINIAN or WHITE-TAILED DEER (Cariacus virginianus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
22½	4	15¾ (spread)	...	12	Medora, N.D.	Theodore Roosevelt.
21½	3¾	3¼	13½	4+4	New York State	Sir Edmund G. Loder, Bart.
19½	4	...	19¾	12	Maine, U.S.A.	H. S. Wellcome.
19	3¼	11¾	15	4+4	North America	Rowland Ward.
17¾	4¾	...	...	27+25	The Bandera .	Moreton Frewen.
♀ 12¼	4	8	...	3+3	British Columbia	J. Turner-Turner.

Malformed White-tailed Deer Head, 28 points. Shot in Texas by Capt. F. Cookson.



Malformed Marsh Deer Horns.

MARSH DEER—"CIERVO" or SOUTH AMERICAN RED DEER (Cariacus paludosus).

"Larger than a Red Deer in size, has a bright red coat, and the horns usually have ten points" (Admiral Kennedy).

Distribution—The "Chaco" of Paraguay and the Argentine Republic, a few still remaining in Entre-Rios and Uruguay (Admiral Kennedy).

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
–24½	5	16	18	5+5	The "Chaco," Paraguay	Admiral J. R. Kennedy.
23½	6⅞	26	25	5+5	...	Sir Edmund G. Loder, Bart.
23⅜	5⅛	15¾	16¼	4+5	South America .	British Museum.
23¼	6	...	19½	12	Do. .	G. R. Stuart.
22⅝	6¼	20	20½	5+5	Brazil . .	Sir Victor Brooke's Collection.
22⅜	5½	25	...	28	Argentine .	A. Vans-Agnew.
21½	5	12¾	16	5+5	Paraguay . .	Admiral J. R. Kennedy.

MARSH DEER—"CIERVO" or SOUTH AMERICAN RED DEER (Cariacus paludosus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
21½	5½	22	16½	6+6	Paraguay . .	S. Pulley.
20	5½	20	...	4+4	Do. . .	Count Henry Coudenhove.
17½	4¼	...	11	10	Do. . .	Hon. Walter Rothschild.
15½	4½	11¾	...	3+2	Do. . .	Count Henry Coudenhove.
13½	4¾	15	...	4+4	South America .	British Museum.

MEXICAN DEER (Cariacus mexicanus).

[Sir Victor Brooke, *P.Z.S.* 1878, p. 920.]

Dimensions of *Cariacus mexicanus.*

	English inches.
Height at shoulder	27·5
Length of ears	4·3
Do. tail exclusive of hair . . .	5·5
Total length of skull in a straight line . .	9·0
Length from ant. rim of orbit to free extremity of præmaxillæ	4·5
Length of molar and premolar series (upper) .	2·7
Do. antlers	7·5
Greatest span	8·2

Distribution—Mexico.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
13⅝	3⅜	6⅞	11¾	3+3	Mexico . .	British Museum.
8¼	2⅛	4¾	6⅝	3+4	Do. . .	Sir Victor Brooke's Collection.

PAMPAS or CAMP DEER—THE GAMA (Cariacus campestris).

Admiral Kennedy, in his *Sporting Sketches of South America*, thus describes it:—"The gama is of a light buff colour, carries a pretty symmetrical pair of horns, generally six points, but emits so strong an odour as to be called the stinking deer."

Distribution—Uruguay, Paraguay, Argentina, and Northern Patagonia.

Length on outside curve.	Circumference.	Tip to Tip.	Points.	Habitat.	Owner.
14⅝	2⅝	13¼	3+3	La Plata . .	British Museum.
14¼	3	11	3+3	South America .	Sir Edmund G. Loder, Bart.
14	4¼	11¼	3+3	Paraguay . .	Admiral J. R. Kennedy.
13	2½	12⅜	3+3	...	W. Learmonth.
12½	2⅛	8½	3+3	...	Sir Victor Brooke's Collection.
11⅛	3⅞	13¼	3+3	...	Charles Darwin, British Museum.
10⅜	2½	13⅛	3+3	North Patagonia	British Museum.
10	2¼	12⅛	3+3	Buenos Ayres .	Count Henry Coudenhove.
7½	2¼	5½	3+3	...	Duke of Bedford.

PERUVIAN ROE DEER (Cariacus (furcifer) antisiensis).

Distribution—Highlands of Peru.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
9½	7⅝	4⅝	Tinta, South Peru . .	H. Whitely, British Museum.
9⅜	2½	8⅛	Ceuchepate, Peru (11,000 ft.)	Do.

Drawn from a specimen shot by McIver Campbell, Esq.

MULE or BLACK-TAILED DEER (Cariacus macrotis, var. columbianus).

This variety has much larger ears than the White-tailed Deer, and owing to its having the tip of the tail black, is often called Black-tailed.

HEIGHT at shoulder, 30 inches. WEIGHT, about 200 to 250 lbs.

Distribution—Along the Pacific coast, Oregon, California, Washington, Nebraska, Dakota, Wyoming, Colorado, and Kansas.

MULE or BLACK-TAILED DEER
(Cariacus macrotis, var. columbianus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Points.	Habitat.	Owner.
30	5¾	...	41	17	White River, Colorado, N. America	H. A. James.
28⅝	4½	13¼	17¾	5+5	Wyoming . .	Ford G. Barclay.
28½	...	...	24½	...	White River, Colorado, N. America	Major Maitland Kirwan.
27¾	6	15¼	19¼	9+6	British Columbia	G. Wrey.
27	5¼	19½	21⅝	6+5	North America .	Sir Edmund G. Loder, Bart.
26⅞	5	...	...	35	North Dakota .	Theodore Roosevelt.
26¾	4¾	19⅝	20⅛	5+5	Wyoming . .	Ernest Farquhar.
26½	5¾	...	17½	12	Do. . .	Hon. F. Thellusson.
26⅛	4⅛	15⅞	22⅞	6+6	Do. . .	Capt. F. Cookson.
25½	5½	...	21½	8	Do. . .	Sir Peter Walker, Bart.
25½	4¾	...	...	28	Montana . .	P. Liebinger.
25½	4¾	18	24¼	5+5	Colorado . .	E. J. Logan.
25⅜	4⅛	19	20	5+5	Wyoming . .	A. H. Pollen.
25	5¼	27⅜	27⅜	16+13	Montana . .	Moreton Frewen.
24½	5¼	...	23½	10	Maine . .	H. S. Wellcome.
24	5¼	...	20¼	10	Wyoming . .	William Fox.
24	4½	11¾	18⅛	12+11	Do. . .	E. N. Buxton.
23½	...	18	28½	26	British Columbia	J. Turner-Turner.
22⅜	4⅜	14⅞	17½	5+4	Yellowstone River	British Museum.
22⅛	4	12½	16⅜	4+4	Do.	Do.
21⅝	4¾	17½	19¼	5+4	Kansas . .	Sir Victor Brooke's Collection.
–21	...	19	...	...	Vancouver . .	Clive Phillipps-Wolley.
19¼	4¼	14	16½	3+3	California . .	Sir Victor Brooke's Collection.
–16½	4½	17	...	5+4	...	Dublin Museum.

MUSK DEER (Moschus moschiferus).

HEIGHT at shoulder, 22 inches (Major A. E. Ward).

WEIGHT, 25 to 30 lbs.

Distribution—"The range of the Musk Deer includes the whole of the Himalayas as far west as Gilgit, as well as a large area in Central Asia, extending northwards into Siberia, while to the eastwards it embraces Cochin-China. The height of the animal at the withers is about 20 inches, and the tusks of adult males are between 2 and 3 inches in length, exclusive of the portion embedded in the jaw-bone. Individuals and local races vary greatly in colour" (R. Lydekker).

Length of Tusk.	Habitat.	Owner.
3	Amurland.	British Museum.
$2\frac{3}{4}$	Himalayas.	Rowland Ward.

PRONG-HORNED ANTELOPE (Antilocapra americana).

HEIGHT at shoulder, 36 inches. WEIGHT about 70 to 80 lbs. clean.

Distribution—Western United States, from British Columbia into Mexico (J. E. Harting).

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
–17¼	6½	...	9	N. W. Canada .	J. Whitaker.
–17	(20 inches broad)		...	...	Otho Shaw.
–16	6½	...	...	N. Dakota . .	Theodore Roosevelt.
15¾	6¼	5⅞	...	Wyoming . .	St. George Littledale.
15¾	5⅛	...	20	...	Otho Shaw.
15½	4½	9½	...	Wyoming . .	W. R. Cookson.
15⅛	6¼	7⅝	...	North America .	Col. Ralph Vivian.
14⅞	5	5¼	...	New Mexico . .	Capt. F. Cookson.
14½	5¾	12	...	...	C. F. Bengough.
–14½	...	...	12½	Wyoming . .	T. W. H. Clarke.

PRONG-HORNED ANTELOPE (Antilocapra americana)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
14½	6	...	9½	Laramie Plains, Wyoming	Ford G. Barclay.
14½	6⅝	5¼	...	Wyoming . .	Lieut.-Col. the Hon. W. Coke.
14¼	6	2⅝	8⅛	...	Sir Victor Brooke's Collection.
-14¼	5⅜	6¼	...	Wyoming . .	Count Felice Scheibler.
14	5¾	13¾	...	Colorado . .	E. J. Logan.
14	6	6⅜	...	Wyoming . .	Sir Peter Walker, Bart.
-13	6½	8½	9	Do. . .	Dublin Museum.
13	5¾	...	...	North Park, Colorado	Sir Peter Walker, Bart.
13	5½	...	5½	Wyoming . .	Crawford E. Logan.
13	6½	5½	5½	Colorado . .	Sir Edmund G. Loder, Bart.
12¾	5½	10	...	Do. . .	E. G. Verschoyle.
12⅝	6½	5	...	Wyoming . .	Hon. Walter Rothschild.
-12½	6	6⅛	...	Do. . .	A. Rogers.
12⅜	5¾	4⅞	...	Do. . .	E. N. Buxton.
12	8¾	4¼	...	Do. . .	G. Wrey.
11¾	5¾	6	...	Do. . .	Gathorne Hardy.

Hartebeeste (*Bubalis caama*).

HARTEBEESTE (Bubalis caama).

The true Hartebeeste of South Africa—often called by the Boers the Rooi (red) Hartebeeste, to distinguish it from the Tsessebe (Bastard Hartebeeste or Zulu Hartebeeste of the Dutch hunters) and Lichtenstein's Hartebeeste—is still, thanks to its wariness, speed, and desert-loving habits, fairly abundant in many of its ancient haunts. A few still linger in the old Bechuanaland country in the north-west of Cape Colony. Although practically exterminated in the Orange Free State and in most of the Transvaal (except to the north-west), plenty of Hartebeeste are to be found in the pleasant country—partly plains, partly open forest—of British Bechuanaland and the Bechuanaland Protectorate. In the North Kalahari and the desert regions about the Botletli River, big troops are to be met with. The Hartebeeste is an extremely good sporting animal, enormously fleet and enduring, and not by any means easy to bring to bay. Its flesh is very palatable, and its brilliant coat much sought after by the native tribes.

This Antelope is probably the best known one of the group, a living example of which is generally to be found in our Zoological Gardens. It was until the last few years most numerous, but owing to the rapid growth of civilisation has become one of the rare animals of South Africa.

HEIGHT at withers about 48 inches.

Distribution—South Africa: Griqualand West, eastern border of the Kalahari desert, and eastwards to the river Serule on the road from Bamangwato to Tati; also from the Botletli River to the Zambesi. Farther northwards *B. caama* is replaced by *B. lichtensteinii.*

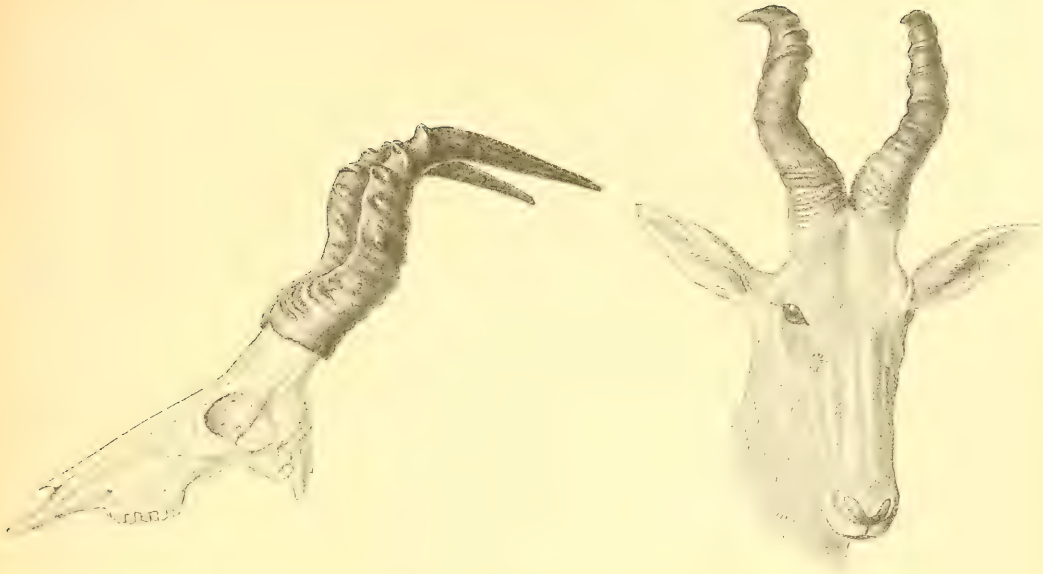
Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
25		. .	Orange Free State .	F. H. Barber.
25	11	10	...	C. Rube.
24⅞	11	7	Nata River	H. M. Barber.
24½	12	9½	South Africa . .	C. D. Rudd.
24⅛	11	13	Do. .	Sir J. Campbell Orde, Bart.
24	.	...		Lionel Phillips.
23¾	10	8¾	South Africa .	Sir A. Smith, British Museum.
23½	11½	9½	Do. . .	Hon. Walter Rothschild.
23½	11½	10¾	Khama's Country .	F. C. Selous.
23¼	10⅜	8⅛	Near the Makari Kari Salt Pan	The late J. S. Jameson.
23	11¼	6	South Africa . .	F. C. Selous.
23	11	11	Do. .	A. Beit.
22½	10¾	10⅛	Do. .	Sir Edmund G. Loder, Bart.
22¼	11½	8	Do. . .	A. Moseley.
22¼	12¼	6⅛	Do. . .	Major R. Hayes Sadler.
22 1/16	13	11	Do. .	Paris Museum.
22	11½	10½	...	Dublin Museum.
22	10⅞	8⅛	South Africa . .	Sir Victor Brooke's Collection.
21	11	9	Kalahari .	H. A. Bryden.
20¾	10⅛	8⅛	Do. .	H. H. Williams.
20·5	10·5	6·5	Do.	Berlin Museum.
20	11	4½	Natal . .	Col. G. D. F. Sulivan.
♀ 19¾	7½	9	South Africa	The late J. S. Jameson.
♀ 19	8½	6½	Kalahari .	H. A. Bryden.

BUBALINE ANTELOPE (Bubalis buselaphus).

HEIGHT at withers about 43 inches.

Distribution—North Africa and Arabia (interior of Morocco, Algeria, and Tunis).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
14½	8⅝	9⅜	North Africa .	British Museum.
14⅛	6¾	9¾	Soudan (?) .	Col. Ralph Vivian.
13⅛	7	5¼	North Africa . .	Zoological Society, British Museum.



JACKSON'S HARTEBEESTE (Bubalis jacksoni).

This is one of the new species of Hartebeeste, first shot in 1890 by Mr. F. J. Jackson in British East African Territory. It had been obtained by other travellers before but not identified. Mr. Jackson says: "Up north all along the top of the Elgeyo escarpment (continuation of Mau) into Turkwell, to the north and north-east of Mount Elgon, it is common, and takes the place of *B. cokei.* Round Baringo it is fairly numerous, but some marches south of Njems the *B. cokei* takes its place."

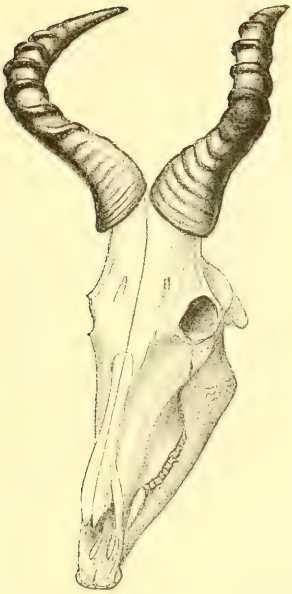
It is generally distributed throughout the Masai and Sūk countries, north of Lake Naivasha, westwards Kavirondo, Uganda, and the vicinity of the Nile. Much larger than *Bubalis cokei*, and generally of lighter colour, partaking of the same nature and habits (E. Gedge).

Distribution—Central Africa: country between Lake Victoria Nyanza and Lake Naivasha.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
24½	10½	11¼	East Central Africa	F. J. Jackson.
24	10⅜	6⅞	Do.	Do.
23½	12	9	Do.	E. Gedge.

JACKSON'S HARTEBEESTE (Bubalis jacksoni)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
23	11¾	8¼	East Central Africa .	Sir Edmund G. Loder, Bart.
22⅞	10⅛	11¾	East Victoria Nyanza	Paris Museum, C. L. Decle.
22½	9¾	6	East Central Africa .	Sir J. Campbell Orde, Bart.
22⅜	10¾	11	East Victoria Nyanza	Capt. F. D. Lugard.
–22	11	11	East Central Africa .	T. E. Buckley.
20⅞	11¾	9⅝	Do. .	F. J. Jackson.
20½	11¼	9¾	Do. .	Rowland Ward.
20½	12	8	Do. .	Major W. H. Williams.
20½	10⅞	10⅝	Do. .	Capt. J. W. Pringle, R.E.
19½	11	8	Mount Elgon . .	Rowland Ward.
–19·5	11·5	2·25	...	Berlin Museum.
18	11¼	8¼	East Central Africa .	Capt. F. D. Lugard.
♀ 16¾	8	9⅜	Do. .	F. J. Jackson.



Shot by Major C. H. Villiers on the Mau Plateau.

HYBRID HARTEBEESTE (Bubalis cokei and jacksoni).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$18\frac{7}{8}$	10	9	...	Major C. H. Villiers.

TORA or TETEL ANTELOPE (Bubalis tora).

HEIGHT at withers about 48 inches.

Distribution—Upper Nubia, Northern Abyssinia, and Kordofan.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
21	9	19	Soudan . .	Lieut-Col. the Hon. W. Coke.
$20\frac{7}{8}$	$9\frac{1}{4}$	$14\frac{1}{2}$	Do. . .	Hon. Walter Rothschild.
20	$9\frac{5}{8}$	$15\frac{5}{8}$	Do. . .	British Museum.
$19\frac{3}{4}$	9	$16\frac{1}{8}$	Abyssinia . .	Do.
$19\frac{1}{4}$	9	$13\frac{3}{4}$	Do. . .	Sir Victor Brooke's Collection.
$18\frac{1}{2}$	$8\frac{3}{4}$	$15\frac{1}{4}$	Soudan . .	Col. Ralph Vivian.
$17\frac{1}{2}$	$9\frac{3}{4}$	18	Bogos Land, Abyssinia	British Museum.
♀ $14\frac{1}{2}$	$6\frac{7}{8}$	$5\frac{5}{8}$	Soudan . .	Hon. Walter Rothschild.
$13\frac{7}{8}$	$6\frac{3}{4}$	14	Upper Nubia .	Sir Edmund G. Loder, Bart.

SWAYNE'S HARTEBEESTE (Bubalis swaynei).

Type—British Museum.

Native name—Sig.

Closely allied to *B. cokei* and *B. tora*, but can readily be distinguished from either by its dark skin-markings, especially on the face.

HEIGHT at withers about 47 inches.

Distribution—Somaliland.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
20¼	8⅞	26¾	Somaliland .	Capt. H. G. C. Swayne.
18⅜	8¾	18	Do. .	Do.
17¾	9¾	20	Do. .	Digby Davies.
17¾	10	21½	Do. .	E. Lee-Townshend.
17½	8⅛	19½	Do. .	T. W. H. Clarke.
17½	9¼	19	Do. .	Sir Edmund G. Loder, Bart.

SWAYNE'S HARTEBEESTE (Bubalis swaynei) —*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
17½	10	21¾	Somaliland .	Capt. J. M'Call Maxwell.
17½	9¾	21	Do. . .	H. A. Bryden.
–17½	9	19½	Do. . .	C. V. A. Peel.
17¼	8½	21	Do. . .	Major C. F. Blane.
–17¼	...	...	Do. . .	Capt. George Douglas.
17	9	10	Do. . .	W. W. Ashley.
17	9	20¾	Do. . .	J. Byng Paget.
17	9½	19	Do. . .	Sir H. D. Tichborne, Bart.
17	8¾	15½	Do. . .	Capt. George Campbell.
16½	9½	15¾	Do. . .	Paris Museum.
16½	10	16	Do. . .	J. Kenneth Foster.
–16½	9¾	12¾	Do. . .	Hon. Walter Rothschild.
16⅜	9	17⅛	Do. . .	W. D. James.
16¼	8½	20½	Do. . .	Lord Delamere.
16	8⅛	18	Do. . .	H.R.H. le Duc d'Orleans.
16	9¾	17½	Do. . .	Prince Nicolas Ghika.
–15½	9	15¼	Do. . .	Dr. Percy Rendall.
15¼	8½	13¾	Do. . .	A. H. Straker.
15¼	9½	20	Do. . .	A. E. Leatham.
15¼	7¼	10⅝	Do. . .	E. Lort-Phillips.
15	8¼	21	Do. . .	Major C. C. Ellis.
–♀ 13¼	7	19	Do. . .	C. V. A. Peel.

COKE'S HARTEBEESTE (Bubalis cokei).

The common Hartebeeste of the coast region and of the Masai country south of Lake Naivasha, where it gives place to Jackson's Hartebeeste (E. Gedge).

First shot by Lieut.-Col. The Hon. W. Coke. Circumference of neck 35½ inches. HEIGHT at withers 48 inches. WEIGHT of Bull shot by Capt. R. A. J. Montgomerie, C.B., R.N., 312 lbs. One shot in Masailand by Count Felice Scheibler about 250 lbs.

Distribution—East Africa (Masailand and adjoining territory). Is replaced by *B. jacksoni* north and west of Athi Plains.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
19¼	10	18¾	East Africa . .	J. Gardiner-Muir.
19	9¾	16	Do. . .	Sir Robert Harvey, Bart.
-19	10¾	14	Do. . .	Berlin Museum.
18⅝	8⅞	16¼	Do. . .	F. J. Jackson.
-18½	10½	18	West of Mombasa	C. W. Hobley.
18¼	9½	13⅛	East Africa . .	H. C. V. Hunter.
-18	7½	12½	Masailand . .	Count Felice Scheibler.

COKE'S HARTEBEESTE (Bubalis cokei)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$17\frac{1}{2}$	$8\frac{1}{8}$	$15\frac{3}{4}$	East Africa . .	Count Felice Scheibler.
$17\frac{5}{8}$	$9\frac{1}{2}$	11	Do. . .	J. Carr Saunders.
17	$9\frac{3}{8}$	$13\frac{1}{4}$	Machakos . .	Capt. F. D. Lugard.
$16\frac{3}{8}$	8	$12\frac{3}{8}$	East Africa . .	British Museum.
$16\frac{1}{4}$	9	$17\frac{1}{4}$	Do. . .	Sir Victor Brooke's Collection.
$16\frac{1}{8}$	$8\frac{5}{8}$	$13\frac{1}{4}$	Kilima'njaro .	Sir John Kirk, M.D., K.C.B.
16	$9\frac{3}{4}$	12	East Africa . .	E. Gedge.
$15\frac{3}{4}$	$8\frac{3}{4}$	$10\frac{1}{8}$	Taita . . .	J. Wray, British Museum.
$15\frac{1}{2}$	$10\frac{1}{4}$	$11\frac{1}{2}$	...	Sir Edmund G. Loder, Bart.
...	$5\frac{3}{4}$	11	East Africa . .	W. Astor Chanler.
14	10	$11\frac{7}{8}$	Do. . .	Hon. Walter Rothschild.
$13\frac{1}{2}$	$9\frac{1}{8}$	$12\frac{1}{2}$	Do. . .	Rowland Ward.
$-11\frac{1}{2}$	...	$17\frac{1}{2}$	Do. . .	Sir John Willoughby, Bart.

Drawn from a specimen obtained at Lokoja, Upper Niger, by the late Dr. Higgs.

WEST AFRICAN HARTEBEESTE (Bubalis major).

Distribution—West Africa, Gambia, Lower Niger District, and interior of Cameroons.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–23·5	12·5	6	Togoland . .	Berlin Museum.
23	12¼	9¼	Niger District .	Hon. Walter Rothschild.
–21¼	11	9⅛	Senegambia .	Paris Museum.
21	11	9¼	Lokoja . .	Capt. F. D. Lugard.
20⅜	10¼	7	Africa . . .	British Museum.
–19⅞	11½	10⅜	Gambia . .	Dr. Percy Rendall.
18	9	7	Lokoja . .	The late Dr. Higgs (see illustration).
♀ 17½	8¾	10	Do. . .	A. J. Arnold.
17¼	9	5½	Do. . .	Capt. F. D. Lugard.

LICHTENSTEIN'S HARTEBEESTE (Bubalis lichtensteini).

Zambesi name—"Godoñko." *Chinyanja*—"Ngondo."

Lichtenstein's Hartebeeste, which, saving the shape of the horns and a somewhat lighter colour, differs very little from the true Hartebeeste, is, like many others of the African fauna, somewhat capriciously distributed. Like the other Hartebeestes it is speedy and untiring and, even when severely wounded, possessed of immense vitality. South of the Zambesi this antelope is to be found perhaps most abundantly in the north of the Gaza country and the territory between there and the mouth of the Zambesi River. The venison is good eating. The horns of this antelope are, it will be observed, shorter and flatter at the base than those of the true Hartebeeste; the face is less elongate, and lacks the dark colouring so noticeable in *Bubalis caama*.

HEIGHT at withers 52½ inches. ♂ killed in Lake Nyassa by Dr. Percy Rendall.

Distribution—Africa, north of the Sabi River, Nyassaland; British and German East Africa south of the Pangani River.

LICHTENSTEIN'S HARTEBEESTE (Bubalis lichtensteini)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–21	...	...	...	O. R. Dunell.
20	$12\frac{1}{8}$	8	Zanzibar . .	Sir John Kirk, M.D., K.C.B.
$-20\frac{3}{16}$	$11\frac{15}{16}$	$7\frac{5}{16}$	Brit. Cent. Africa	A. S. Hamilton.
$19\frac{1}{2}$	$11\frac{1}{2}$	$8\frac{1}{8}$	South East Africa	Hon. Walter Rothschild.
$-19\frac{1}{2}$	$11\frac{3}{4}$	$8\frac{1}{2}$	Cent. Africa .	F. V. Kirby.
$19\frac{1}{4}$	$10\frac{3}{8}$	$6\frac{5}{8}$	Zanzibar . .	Sir John Kirk, M.D., K.C.B.
19	$11\frac{3}{4}$	$5\frac{1}{4}$	Pungwe River .	J. W. Allen.
19	$11\frac{1}{2}$	$4\frac{7}{8}$	East Africa . .	British Museum.
$18\frac{5}{8}$	$11\frac{3}{8}$	$3\frac{1}{8}$	Manica Plateau, north of Zambesi	F. C. Selous.
$18\frac{1}{2}$	$12\frac{3}{4}$	$4\frac{3}{4}$	Pungwe River .	Hon. T. Thynne.
$18\frac{1}{2}$	$10\frac{1}{4}$	5	South Africa .	F. C. Selous, British Museum.
$18\frac{1}{2}$	$13\frac{1}{2}$	6	East. Mashonaland	A. Neilson.
$18\frac{1}{2}$	13	$2\frac{1}{2}$	Songwe, Lake Nyassa	James Yule.
$18\frac{1}{4}$	12	8	Pangani, East Africa	Gen. Lloyd Mathews.
$18\frac{1}{4}$	$11\frac{1}{4}$	$5\frac{1}{8}$	Do. . .	F. J. Jackson.
$-18\frac{1}{4}$	12	$6\frac{1}{2}$	Beira . . .	Dr. Percy Rendall.
$-17\frac{3}{4}$	12	$11\frac{1}{2}$	Brit. Cent. Africa	Do.
$-17\frac{1}{2}$	11	$37\frac{3}{8}$	Beira District .	A. M. Naylor.
$-17\frac{3}{8}$	$11\frac{3}{8}$	$9\frac{1}{16}$	East Africa . .	Paris Museum.
$17\frac{1}{4}$	$12\frac{1}{4}$	$3\frac{3}{4}$	Maskanala . .	Hon. K. Campbell.
17	$12\frac{3}{4}$	$5\frac{5}{8}$	Pungwe River .	Capt. F. H. Lehmann.
17	11	$4\frac{3}{4}$	Lower Shiré .	Surgeon Dowson, R.N.
17	10	$4\frac{3}{4}$	East Africa . .	Dublin Museum.
$16\frac{1}{2}$	11	$9\frac{3}{4}$	Pungwe River .	Marquis of Hamilton.
$16\frac{1}{2}$	$11\frac{1}{2}$	$5\frac{5}{8}$	Do. . .	Viscount Ennismore.
16	12	$4\frac{1}{4}$	Do. . .	A. Cameron.
16	$10\frac{3}{4}$	6	Shiré River . .	Comdr. A. T. Hunt, R.N.
$15\frac{3}{4}$	$12\frac{3}{4}$	$5\frac{3}{4}$	Pungwe River .	C. M. Swire.

LICHTENSTEIN'S HARTEBEESTE (Bubalis lichtensteini)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
15½	10½	2¾	Pungwe River .	Durban Museum.
15¼	10¾	2½	Do. . .	G. L. Bonham.
♀ 15	8⅞	4⅞	River Shaba (Mashonaland)	F. C. Selous, British Museum.
♀ 14½	7¾	2⅞	East Africa . .	Rowland Ward.
♀ 14⅛	8½	5⅝	Transvaal .	British Museum.
13	7½	3½	Pungwe River .	Viscount Ennismore.
12⅞	7	3⅞	Soudan . .	The late F. L. James.
♀ 12¾	7¾	5½	Brit. Cent. Africa	Dr. Percy Rendall.
♀ 12	7¾	4¾	...	Durban Museum.

SENEGAL HARTEBEESTE or **KORRIGUM** (Damaliscus korrigum).

Distribution—Senegambia and Central West Africa.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–21⅝	9⅞	15⅜	Senegambia . .	Paris Museum.
21⅜	9⅛	11¾	Gambia . .	Dr. P. Rendall, British Museum.
19	6¾	10	Do. . .	Earl of Derby, British Museum.
18¾	9⅛	11	Do. . .	Do.
17	6½	6½	Do. . .	Sir Edmund G. Loder, Bart.
–15½	7	8	Do. . .	Dublin Museum.

This antelope, until very recently, was classified with the *Damaliscus jimela*, which it closely resembles.

TOPI HARTEBEESTE (Damaliscus jimela).

Found in East Africa consorting with herds of Coke's and Jackson's Hartebeeste. Fairly numerous in Sūk country and Uganda. Greatest number seen at one time in the district of Buddu, Uganda. Partakes of the wary nature of the Hartebeeste (E. Gedge).

Distribution—East Africa, Galla country right away north-east to Uganda.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
19¼	6⅝	3⅜	East Africa . .	H. C. V. Hunter.
19	7½	8	Do. . .	Rowland Ward.
18½	8⅜	5¼	Do. . .	J. Carr Saunders.
18½	8¾	8½	Do. . .	Sir Edmund G. Loder, Bart.
18⅛	6⅜	5⅞	Do. . .	Sir Robert Harvey, Bart.
18	8⅛	5⅜	Do. . .	F. J. Jackson.
17½	8	7¼	Uganda . .	Hon. Walter Rothschild.
17⅛	7¾	5	East Africa . .	H. C. V. Hunter.
17	8	7	Do. . .	Sir Robert Harvey, Bart.
16⅞	7	5½	Do. . .	F. J. Jackson.

TOPI HARTEBEESTE (Damaliscus jimela)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$16\frac{1}{2}$	8	$5\frac{3}{8}$	East Africa . .	Rowland Ward.
$16\frac{3}{8}$	$5\frac{7}{8}$	5	River Juba . .	Sir John Kirk, M.D., K.C.B.
$16\frac{3}{8}$	$6\frac{1}{8}$	$5\frac{1}{2}$	Coast region between Lamu and River Juba	Do.
$15\frac{5}{8}$	$7\frac{5}{8}$	$5\frac{3}{4}$	Do. .	Hon. Walter Rothschild.
$15\frac{1}{2}$	$8\frac{1}{2}$	7	Do. .	E. Gedge.
$15\frac{1}{2}$	$7\frac{5}{8}$	$5\frac{5}{8}$	East Africa . .	F. H. Barber.
$14\frac{1}{2}$	$6\frac{3}{4}$	$6\frac{3}{4}$	Coast region between Lamu and River Juba	Justice Hopley.
$-14\frac{1}{4}$	5	$9\frac{3}{4}$	...	Berlin Museum.

TIANG HARTEBEESTE (Damaliscus tiang).

Distribution—Senaar, Kordofan, Bahr-el-Ghazal.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
♀ $20\frac{1}{4}$	$6\frac{3}{4}$	$6\frac{7}{8}$	Bahr-el-Ghazal .	Consul Petherick, British Museum.
$10\frac{1}{8}$	$6\frac{3}{4}$	$7\frac{7}{8}$	Do. . .	Do.

Drawn from a specimen shot in Mashonaland by F. C. Selous.

TSESSEBE ANTELOPE or BASTARD HARTEBEESTE
(Damaliscus lunata).

The Tsessebe has the reputation—in the opinion of all hunters who have tested its speed, a well-deserved one—of being the fleetest and most enduring quadruped to be found in all Southern Africa. If it were not, indeed, that this handsome antelope, in common with its near relative the hartebeeste, happens to be rather lacking in presence of mind, it would very seldom fall to the sportsman's rifle. The Tsessebe is not difficult to circumvent. A troop can be often turned from its course, or brought to a halt, by firing a bullet or two over the heads of the fleeing beasts. Or if the leader of the troop can be wounded and turned out, the rest of the animals become confused, and now and again offer easy shots. Like the hartebeeste the Tsessebe has extremely drooping quarters. The skin of one of these antelopes, freshly killed, is very beautiful, the wonderful smoothness and the brilliant purplish bloom of the coat being very remarkable.

WEIGHT about 300 lbs. HEIGHT at shoulder about 48 inches.

Distribution—South-East Africa. Open country in territory adjacent to Limpopo River, Mashonaland, and westwards to Lake Ngami.

TSESSEBE ANTELOPE or BASTARD HARTEBEESTE (Damaliscus lunata)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$15\frac{3}{4}$	$7\frac{1}{2}$	$15\frac{1}{2}$	Mashonaland .	Sir John Willoughby, Bart.
$15\frac{5}{8}$	$7\frac{1}{2}$	$11\frac{3}{4}$	...	Sir Edmund G. Loder, Bart.
$15\frac{1}{4}$	$8\frac{1}{8}$	$12\frac{1}{2}$	Daka, 60 miles south of the Victoria Falls	F. C. Selous.
$15\frac{1}{4}$	8	$12\frac{1}{4}$	South Africa .	Sir A. Smith, British Museum.
$15\frac{1}{8}$	$7\frac{1}{8}$	12	Do. . .	Sir Victor Brooke's Collection.
15	7	11	Do. . .	A. Moseley.
$14\frac{7}{8}$	8	10	Limbabo Veldt .	F. V. Kirby.
$14\frac{3}{4}$	$7\frac{3}{8}$	$11\frac{5}{8}$	Pungwe River .	J. W. Allen.
$14\frac{1}{2}$	$7\frac{3}{8}$	13	Matabeleland .	W. Van Ness.
$14\frac{1}{4}$	$7\frac{1}{2}$	$10\frac{1}{4}$	Mashonaland .	Hon. Walter Rothschild.
$14\frac{1}{8}$	$6\frac{3}{4}$	$9\frac{5}{8}$	Pungwe River .	C. M. Swire.
14	$7\frac{1}{4}$	10	Do. . .	Marquis of Hamilton.
14	$6\frac{3}{4}$	$12\frac{7}{8}$	South Africa .	A. Beit.
–14	8	$12\frac{1}{2}$	Do. . .	T. E. Buckley.
♀ $13\frac{7}{8}$	$6\frac{5}{8}$	$11\frac{1}{2}$	Mashonaland .	F. C. Selous, British Museum.
$13\frac{7}{8}$	$6\frac{1}{4}$	$12\frac{3}{8}$	South Africa .	H. and C. Beddington.
$13\frac{1}{2}$	$6\frac{1}{8}$	$13\frac{5}{8}$	Do. . .	C. D. Rudd.
–$13\frac{1}{2}$	...	$11\frac{7}{8}$	Mabonga River .	H. M. Barber.
$13\frac{1}{2}$	6	$9\frac{1}{4}$	Central Africa .	J. A. Nicolls.
–$12\frac{1}{4}$	$5\frac{3}{4}$	$10\frac{5}{8}$	Sabi Flats . .	Dr. Percy Rendall.

BLESBOK (Damaliscus albifrons).

Formerly to be numbered by hundreds of thousands, the beautiful Blesbok has in the last twenty years grown very scarce indeed. It can now scarcely be reckoned as a South African beast of chase, being only met with in small numbers on a few Boer farms in the Transvaal and the Orange Free State. Yet, thirty or forty years ago, Blesboks often literally darkened the face of the land with their innumerable legions. The north of the Cape Colony, Griqualand West, the Free State, and the plains of the Western and Southern Transvaal, may be described as the true home of this charming antelope in the good days. In 1848 Gordon Cumming speaks of a sight he beheld in the Blesbok country. "The plains," he says, "exhibited one purple mass of graceful Blesboks, which extended without a break as far as my eyes could strain; the depth of their vast legions covered a breadth of about six hundred yards." What a contrast with the scarcity of the present day!

HEIGHT about 3 feet 4 inches. WEIGHT about 200 lbs.

Distribution—Carefully preserved on some open high veldt farms of Cape Colony, Orange Free State, Transvaal, and Bechuanaland.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
18¼	5¾	12¼	South Africa .	Sir Edmund G. Loder, Bart.
17¼	6¾	7	Merrie-Metzie .	Abe Bailey.
16⅝	6⅝	9½	Orange Free State	Julius Jeppe.
16⅛	6¼	8⅛	South Africa .	Sir Edmund G. Loder, Bart.
15⅝	6¾	5½	Do. . .	A. Beit.
15½	6⅞	8¼	Do. . .	Capt. F. H. Lehmann.

BLESBOK (Damaliscus albifrons)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$15\frac{1}{4}$	$6\frac{1}{4}$	$5\frac{3}{4}$	South Africa .	Hon. Walter Rothschild.
$15\frac{1}{4}$	$6\frac{1}{8}$	$6\frac{1}{2}$	Zululand, 1863 .	Maj.-Gen. Arthur Ellis, C.S.I.
$15\frac{1}{8}$	$6\frac{1}{2}$	$7\frac{3}{4}$	South Africa .	Hon. Walter Rothschild.
$14\frac{1}{4}$	$6\frac{1}{8}$	$8\frac{3}{4}$	Cape Colony .	H.R.H. Duke of Saxe-Coburg and Gotha.
14	$6\frac{3}{8}$	$7\frac{1}{2}$	Do. . .	Sir Victor Brooke's Collection.
–14	$8\frac{3}{4}$	$6\frac{1}{4}$	Transvaal . .	T. E. Buckley.
14	$5\frac{1}{8}$	$7\frac{1}{8}$	Orange Free State	Rowland Ward.
$13\frac{7}{8}$	$6\frac{1}{8}$	$7\frac{3}{8}$	South Africa .	British Museum.
$13\frac{1}{2}$	5	$5\frac{3}{4}$	Transvaal . .	F. C. Selous.
♀ $12\frac{5}{8}$	$4\frac{3}{4}$	7	Do. . .	British Museum.

BONTEBOK (Damaliscus pygargus).

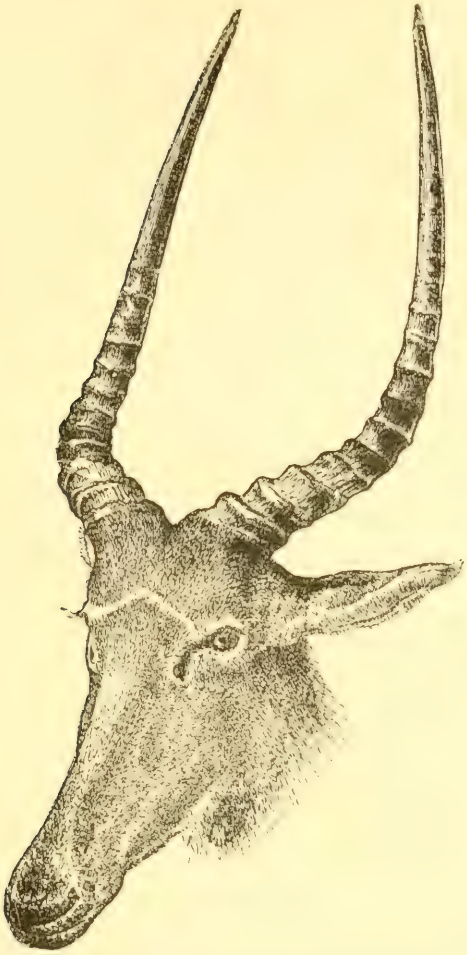
The Bontebok, or Pied Antelope, an extremely near relative of the Blesbok, although formerly abounding in tens of thousands on the Karroos of Cape Colony and the plains of the Orange Free State, is now reduced to a single herd carefully preserved on some flats on the estate of Mr. Vander Byl, near Swellendam, in the south of Cape Colony. Bonteboks, by the way, have been denizens of the district of Swellendam since the days of the earliest European travellers. The curious pied marking of the Bontebok, its snow-white face, belly, legs, and rump, and the glaze-like, purplish-lilac gloss of the upper part of the coat—which may be described as chestnut upon the neck and warm purplish-brown upon the body—are very remarkable. The horns very nearly resemble those of the Blesbok in shape, but the colour is much darker. The Blesbok and Bontebok formerly gave immense sport to the Boers and European hunters. Both of these blaze-faced antelopes run steadily up-wind, "carrying their broad white noses close to the ground like a pack of harriers in full cry."

HEIGHT about 3 feet 4 inches.

Distribution—Closely preserved in Cape Colony.

BONTEBOK (Damaliscus pygargus)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$16\frac{1}{2}$	7	8	Orange Free State	Capt. H. H. Livingstone.
$16\frac{3}{8}$	$6\frac{3}{4}$	$9\frac{1}{8}$	...	British Museum.
16	$6\frac{1}{4}$	$6\frac{3}{4}$	Cape Colony .	Rowland Ward.
$15\frac{1}{2}$	$6\frac{1}{2}$	$8\frac{1}{2}$	...	Hon. Walter Rothschild.
$15\frac{3}{8}$	$6\frac{1}{8}$	$8\frac{1}{8}$	Cape Colony .	Sir Victor Brooke's Collection.
♀ 15	$5\frac{1}{4}$	...	Orange Free State	Capt. H. H. Livingstone.
15	$6\frac{3}{8}$	$7\frac{5}{8}$	Cape Colony .	Capt. F. Cookson.
15	$6\frac{3}{4}$	$8\frac{1}{2}$	Do. . .	F. C. Selous.
$14\frac{1}{2}$	$6\frac{1}{4}$	$8\frac{1}{4}$	South Africa .	Hon. Walter Rothschild.
$14\frac{1}{8}$	$5\frac{3}{8}$	$7\frac{3}{8}$	Cape Colony .	F. C. Selous.
$13\frac{3}{4}$	5	$6\frac{1}{2}$	South Africa .	A. W. Davis.
$13\frac{3}{4}$	$6\frac{1}{8}$	$7\frac{7}{8}$	Do. . .	C. D. Rudd.



Drawn from a specimen shot by H. C. V. Hunter.

HUNTER'S ANTELOPE (Damaliscus hunteri).

Type—British Museum.

Discovered by H. C. V. Hunter, October 1888.

Live specimens of this would be a great acquisition to any of the Zoological Societies, as it has never been seen in captivity.

Distribution.—Southern Somaliland, north banks of the Tana River.

HUNTER'S ANTELOPE (Damaliscus hunteri)—*continued.*

Length. On front curve.	Length. Straight.	Circumference.	Tip to Tip.	Habitat.	Owner.
$26\frac{1}{4}$	22	$8\frac{1}{8}$	$12\frac{1}{2}$	East Africa . .	Sir Robert Harvey, Bart.
$24\frac{7}{8}$	...	$8\frac{1}{8}$	$15\frac{1}{2}$	Do. . .	H. C. V. Hunter.
$24\frac{5}{8}$	$21\frac{1}{4}$	$8\frac{3}{8}$	$9\frac{3}{4}$	Do. . .	Sir Robert Harvey, Bart.
♀ 21	...	$5\frac{3}{4}$	7	...	F. H. Barber.
$20\frac{3}{4}$	$17\frac{1}{2}$	$5\frac{5}{8}$	7	East Africa . .	Rowland Ward.
$20\frac{1}{8}$	...	$5\frac{5}{8}$	$8\frac{7}{8}$	Do. . .	Hon. Walter Rothschild.

BRINDLED GNU (Connochœtes taurinus).

The Blue Wildebeeste stands somewhat taller than its congener the White-tailed Gnu—a good bull measuring about 4 feet 4 inches at the withers, as against 4 feet. It is, too, of a much less fantastic and more sober habit. The general colour is a slaty dun, variegated upon the neck and fore-quarters by the dark stripes or brindles from which the animal takes its English name. The head, which is disproportionately large, is rendered yet more heavy-looking by the thick black hair and mane with which it is covered. The tail is long, black, sweeping, and very equine. Despite its cumbrous aspect, the Brindled Gnu can gallop at a great pace, and, even when severely wounded, or with but three legs to go upon, will often escape from the mounted hunter. Formerly extremely abundant from the Orange River northwards, the Blue Wildebeeste has been practically exterminated from the country south of the Limpopo. A few troops are, however, found to the westward of British Bechuanaland. In Khama's Country and Rhodesia, and thence northward, right away through Central and East Africa, the Brindled Gnu is still fairly plentiful.

Distribution—South Central Africa; unknown south of the Orange River, and ranges to the north-east as far as Lake Nyassa.

BRINDLED GNU (Connochœtes taurinus)—*continued.*

Length on front curve.	Breadth of Palm.	Tip to Tip.	Widest inside.	Habitat.	Owner.
31¼	...	17	26½	Delagoa Bay .	H. T. and A. H. Glynn.
31	13¼ (circumference)	15¼	29	Sabi Flats .	Dr. R. P. Mitchell.
–31	4¾	21	26	Lydenburg .	F. H. and H. M. Barber.
26⅛	8	14¾	16½	...	Sir Edmund G. Loder, Bart.
–24⅝	7	15¼	23½	Beira District .	A. M. Naylor.
♀ 23¾	9¾ (circumference)	10¼	21¾	Sabi Flats .	H. F. Walker.
23	11½ (circumference)	19½	31	South Africa .	J. A. Nicolls.
23	9⅞	14⅞	...	Orange Free State	H.R.H. Duke of Saxe-Coburg and Gotha.
22¼	4¼	18⅛	26	South Africa .	F. C. Selous.
...	...	...	30½ (outside)	Do. .	Do.
22	5¾	15⅜	23⅛	Do. .	The late J. S. Jameson.
22	5½	19¼	24¼	Do. .	Sir Edmund G. Loder, Bart.
21⅝	6	13⅞	22⅞	Do. .	D. Norman-Ritchie.
21⅝	5¼	17⅜	28½	Do. .	G. H. Banks.
–21½	...	...	...	Between Chobe and Zambesi	Capt. A. St. H. Gibbons.
–21½	...	18½	23½	South Africa .	T. E. Buckley.
21¼	4⅝	20½	26½	Matabeleland .	Major R. Hayes-Sadler.
21	5	16	22½	South Africa .	H. H. Williams.
21	4½	15½	24½	Pungwe River .	Marquis of Hamilton.
20¾	4¾	16¾	24¾	Do. .	Capt. F. H. Lehmann.
20½	4⅝	16¼	23½	Mashonaland .	J. A. Jameson.
20½	12	14⅝	23½	Botletli River, Ngamiland	H. A. Bryden.
20½	12½ (circumference)	12½	25	Do. .	Rowland Ward.
20¼	...	12¾	21¾	Do. .	F. C. Selous.
20	5½	13¾	23½	South Africa .	C. D. Rudd.
20	4¾	14	22	Do. .	Capt. W. F. Sitwell.
19¾	4¼	14	22¾	Pungwe River .	A. Cameron.
19⅝	5⅜	12½	21¼	South Africa .	Hon. Walter Rothschild.

BRINDLED GNU (Connochœtes taurinus)—*continued.*

Length on front curve.	Breadth of Palm.	Widest inside.	Tip to Tip.	Habitat.	Owner.
–19½	...	14½	21⅝	Sabi Flats .	Dr. Percy Rendall.
19½	4¼	12¼	22	East Africa .	Hon. T. Thynne.
19½	4¾	17	26½	Matabeleland .	F. G. Shaw.
19½	4⅛	15¼	24¼	Pungwe River .	Ford G. Barclay.
19¼	11⅛ (circumference)	17⅛	23⅝	South Africa .	H. Atkinson.
19¼	5	15⅜	22⅛	Do. .	H. and C. Beddington.
19⅛	5½	15½	22½	Do. .	F. C. Selous.
19	4½	17¼	22½	Do. .	A. Moseley.
19	5½	11½	13⅝	Do. .	Sir Edmund G. Loder, Bart.
18¾	4	13⅛	20	Angola, Benguella	G. W. Penrice.
18¼	4¼	15½	22½	Pungwe River .	R. Hughes.
18	...	16	...	South Africa .	British Museum.
18	4	15½	22½	Matabeleland .	W. Van Ness.
17¾	3½	15⅛	22¾	Pungwe River .	Viscount Ennismore.
17	4¾	17½	21⅝	...	Sir Victor Brooke's Collection.
16	4	11½	18½	South Africa .	Dublin Museum.
♀ 15½	3	10	17½	Pungwe River .	Viscount Ennismore.

Brindled Gnu (*Connochœtes taurinus*).

WHITE-TAILED GNU (**Connochœtes gnu**).

The White-tailed Gnu, or, as it is invariably called in South Africa, the Black Wildebeeste, is assuredly one of the most extravagant of nature's creations. All travellers and hunters, from the time of Sparrman (1772) downwards, have born testimony to the grotesque and laughable antics of this animal. Although classed by naturalists as a true antelope, the Black Wildebeeste has, to the average eye, something of the buffalo, something of the pony, in its outward appearance. Its shaggy and tufted head, wild and sinister eye, hooked horns, bushy upstanding mane, long white tail, brown body-colouring, and beautifully slender yet muscular limbs, and above all its extraordinary activity and restlessness, and the mad pranks in which it indulges, render it easily distinguishable from its cousin, the brindled gnu. It has a fierce and treacherous disposition. Formerly to be found from the Great Karroo of Cape Colony to the Vaal River in hundreds of thousands, the White-tailed Gnu has dwindled in numbers to some six or seven hundred head, which are now preserved by Dutch farmers in the Orange Free State.

HEIGHT at shoulder about 46 inches.

Distribution—Probably extinct in a wild state, but preserved in many parts of South Africa.

WHITE-TAILED GNU (**Connochœtes gnu**)—*continued.*

Length.	Breadth of Palm.	Tip to Tip.	Widest inside.	Habitat.	Owner.
–28	...	...	...	Colesburg .	F. H. Barber.
–27½	...	...	...	Wynburg . .	Do.
26½	8	14½	...	South Africa .	Sir Edmund G. Loder, Bart.
24	8¼	13¼	...	Do. .	C. D. Rudd.
24	8½	15	...	Do. .	Hon. Walter Rothschild.
22¾	7¼	15	...	Orange Free State	F. C. Selous.
22⅜	8½	15¼	...	South Africa .	Do.
–22 3/16	8	14¾	13	Orange Free State	Dr. Percy Rendall.
22	9	17⅛	...	Do. .	Hon. Walter Rothschild.
22	6½	14½	...	Do. .	Rowland Ward.
21¾	10⅝	18⅝	...	Do. .	British Museum.
–21	10	18½	15	South Africa .	Dublin Museum.
18¾	7¼	10½	...	Do. .	A. Beit.

THE WHITE BEARDED GNU or JACKSON'S WILDEBEESTE
(Connochœtes albojubatus).

Type—British Museum.
Swahili name—" Nyumbo."

Closely allied to the Brindled Wildebeeste. It has a white mane under the throat instead of black, and the body is much lighter in colour.

Discovered by F. J. Jackson.

Distribution—East Africa, Athi Plains, Ukambani, north of Kilima'njaro and west side of Victoria Nyanza.

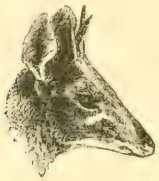
Length on front of curve.	Breadth of Palm.	Tip to Tip.	Widest inside.	Habitat.	Owner.
22 7/8	...	16 1/2	25 3/8	East Africa .	F. J. Jackson.
22 5/8	...	18 3/4	26 1/4	Do. .	H. C. V. Hunter.
21 11/16	12 1/4 (circumference)	17 3/4	21 1/4	Do. .	Paris Museum, Leon Decle.
21	5 1/4 (circumference)	15 1/2	21 1/2	Do. .	Capt. J. W. Pringle, R.E.
20 5/8	...	15 1/8	24	Do. .	Sir Robert Harvey, Bart.
20 1/2	12 1/2 (circumference)	12 1/2	25	Do. .	Rowland Ward.
20	5 1/4	16 1/4	22 1/8	Athi Plains .	E. Gedge.

THE WHITE BEARDED GNU or JACKSON'S WILDEBEESTE

(Connochœtes albojubatus)—*continued.*

Length on front of curve.	Breadth of Palm.	Tip to Tip.	Widest inside.	Habitat.	Owner.
20	12 (circumference)	17	27 (outside)	East Africa .	R. P. Carroll.
19¾	5	13¼	21⅞	Do. .	Capt. R. A. J. Montgomerie, C.B., R.N.
19⅝	5⅜	12½	21¼	... .	Hon. Walter Rothschild.
19	4	15½	22	East Africa .	H. Charrington.
18¼	4	17¼	21⅝	Athi Plains .	Capt. F. D. Lugard.
17	..	15	24 (outside)	East Africa .	W. Astor Chanler.
–...	...	16	28 (outside)	... .	Sir J. Willoughby, Bart.
16½	4	15½	20½	East Africa .	Hon. Walter Rothschild.

The White Bearded Gnu or Jackson's Wildebeeste (*Connochætes albojubatus*).



DUIKER ANTELOPE (Cephalophus grimmi).

The Duiker, or Duikerbok, of which there are several varieties to be found in various parts of the African Continent, is, with the Steinbuck, quite the most ubiquitous of all the antelope family. It matters little where one travels, from the south of Cape Colony right away through Africa, there is to be seen the timid, crouching Duiker. The name Duiker, by the way, which, translated from the Dutch, means "diver," aptly illustrates the furtive, squatting, dodging habits of this small antelope. Thanks to its somewhat sneaking ways, the Duiker is not looked upon with much favour by South African hunters. It loves bush and covert, and is never found on purely open plains or steep rocky mountains. In the heart of the parched Kalahari, far remote from any water supply, the Duiker abounds in bushy and open forest country. It is occasionally hunted with foxhounds, and often gives excellent runs, as that ardent sportsman, General Sir Frederick Carrington, can testify. This animal is found singly or in pairs, and is more often than not secured with the shot-gun. The flesh is moderately good.

HEIGHT at shoulder, adult male about 26 inches.

Distribution—South and East Africa.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
–5½	...	...	Selinya . .	Lionel Phillips.
5⅜	2⅛	2⅞	Khama's Country	F. C. Selous.
–5¼	...	...	...	O. R. Dunell.
5¼	2¼	1½	Zululand . .	Capt. L. O. Williams.
5⅛	2	2⅜	Transvaal . .	H. T. and A. H. Glynn.
–5	2½	⅜	Do. . .	F. V. Kirby.
–5	...	...	Natal . . .	T. E. Buckley.

DUIKER ANTELOPE (Cephalophus grimmi)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$4\frac{3}{4}$	$2\frac{1}{4}$	3	Natal . . .	A. Beit.
$4\frac{1}{2}$	...	$2\frac{7}{8}$	Algoa Bay . .	F. C. Selous, British Museum.
$4\frac{1}{2}$	$2\frac{1}{4}$	$1\frac{3}{4}$	South Africa .	G. H. Banks.
$-4\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{15}{16}$	Barberton . .	Dr. Percy Rendall.
$4\frac{1}{4}$	$1\frac{7}{8}$	$2\frac{3}{4}$	East Africa . .	Sir Robert Harvey, Bart.
$4\frac{1}{8}$	2	$1\frac{1}{2}$	Benguella . .	G. W. Penrice.
$4\frac{1}{8}$	$1\frac{7}{8}$	$2\frac{5}{8}$	Natal . . .	J. Wahlberg, British Museum.
4	2	$2\frac{3}{4}$	Transvaal . .	Julius Jeppe.
4	$1\frac{7}{8}$	$1\frac{1}{2}$	South Africa .	H. and C. Beddington.
4	2	$1\frac{7}{8}$	East Africa . .	F. J. Jackson.
♀ $3\frac{5}{8}$	$1\frac{1}{2}$	$1\frac{3}{8}$	Transvaal . .	Julius Jeppe.
$3\frac{1}{2}$	$1\frac{7}{8}$	$1\frac{3}{4}$	Abyssinia . .	Sir Victor Brooke's Collection.
$3\frac{1}{4}$	2	$2\frac{1}{8}$	South Africa .	D. Norman Ritchie.
$2\frac{3}{4}$	$1\frac{7}{8}$	$1\frac{1}{4}$	Abyssinia . .	British Museum.

BLUE BUCK (Cephalophus monticolor).

HEIGHT at shoulder, 14 inches.

Distribution—Zululand, Angola, etc.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-2\frac{1}{16}$	$1\frac{5}{8}$	$\frac{1}{2}$ tips	Natal . . .	Dr. Percy Rendall.
2	...	$1\frac{3}{4}$	Do. . . .	F. C. Selous.
2	$1\frac{5}{8}$	$1\frac{3}{4}$	Benguella . .	G. W. Penrice.
$1\frac{3}{4}$	$1\frac{5}{8}$	$1\frac{3}{8}$	Do. . .	Hon. Walter Rothschild.
♀ $-1\frac{11}{16}$	$1\frac{11}{16}$	$1\frac{15}{16}$	Natal . . .	Dr. Percy Rendall.

NATAL DUIKER or RED BUCK (Cephalophus natalensis).

There are four specimens in the British Museum, two males and two females.

Male and female shot on the Makongwa Mountains, Barberton, by Dr. Percy Rendall, measured—

HEIGHT at shoulder about $17\frac{3}{4}$ inches ♂, and 18 for ♀.
WEIGHTS, 26 and $27\frac{1}{2}$ lbs.

Distribution—Natal, Transvaal, and Mashonaland.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-3\frac{1}{4}$	$2\frac{5}{8}$	$2\frac{1}{4}$	Spitzkop . .	H. T. and A. H. Glynn.
$-3\frac{1}{4}$	3	2	Foothills of Kahlamba	F. V. Kirby.
$-3\frac{3}{8}$	$2\frac{3}{8}$	2	Makongwa Mountains, Barberton (about 6000 ft.)	Dr. Percy Rendall.
-3	...	...	...	C. T. Jones.
$3\frac{1}{8}$	...	$2\frac{1}{8}$	Natal . . .	Dr. A. Kraus, British Museum.
$2\frac{7}{8}$	3	$2\frac{1}{4}$	Zanzibar . .	Sir John Kirk, M.D., K.C.B., British Museum.
♀ $2\frac{3}{4}$	$1\frac{7}{8}$	1	Foothills of Kahlamba	F. V. Kirby.
$2\frac{3}{4}$	$2\frac{5}{8}$	$2\frac{1}{4}$	South Africa .	Dr. Oakshott.
$-$♀ $1\frac{7}{8}$	$1\frac{3}{4}$	1	Barberton . .	Dr. Percy Rendall.
♀ $1\frac{5}{8}$	$1\frac{7}{8}$	2	South Africa .	Hon. Walter Rothschild.

YELLOW-BACKED DUIKER (Cephalophus sylvicultrix).

HEIGHT at shoulder about 2 feet 9 inches.

Distribution—West Coast of Africa, from Liberia to Angola.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
$6\frac{3}{4}$	...	$4\frac{1}{2}$	Fantee . .	British Museum.
$6\frac{5}{8}$	$3\frac{5}{8}$	$4\frac{3}{8}$	Do. . . .	Do.
$5\frac{1}{2}$	$3\frac{3}{8}$	$4\frac{1}{8}$	Gaboon . .	Sir Edmund G. Loder, Bart.
$4\frac{5}{8}$	...	$2\frac{1}{4}$	Fantee . .	British Museum.

BANDED DUIKER (Cephalophus doriæ).

HEIGHT at shoulder, 16 inches.

Distribution—Liberia.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
$1\frac{7}{8}$	...	1	Liberia . .	Dr. J. Buttikofer, British Museum.

FOUR-HORNED ANTELOPE or CHOUSINGHA
(Tetracerus quadricornis).

Horns in male only.

HEIGHT of male at shoulder about 26 inches.

Distribution—India along the base of the Himalayas, from the Punjab to Nepal; abundant in Central Provinces.

Length.		Circumference.		Tip to Tip.		Habitat.	Owner.
Rear Horn.	Fore Horn.	Rear Horn.	Fore Horn.	Rear Horn.	Fore Horn.		
5	...	...	...	...	...	Jhalawar .	His Highness the Maharaj Rana Bahadur of Jhalawar.
4 3/8	2 1/2	2 1/4	2 3/8	1 5/8	2 7/8	India .	Sir Edmund G. Loder, Bart.
4 1/8	1 1/2	...	...	...	...	...	J. D. Inverarity.
4	2 1/2	1 7/8	1 7/8	3	1 1/8	Indore .	Col. John Evans, British Museum.
4	2	3	1 7/8	1 3/4	2 1/2	Karkote Jungle, near Mhow	Col. G. D. F. Sulivan.
3 5/8	1 3/4	1 7/8	2	1 1/8	2 1/2	India .	Sir Robert Harvey, Bart.

FOUR-HORNED ANTELOPE or CHOUSINGHA

(Tetracerus quadricornis)—*continued.*

Length.		Circumference.		Tip to Tip.		Habitat.	Owner.
Rear Horn.	Fore Horn.	Rear Horn.	Fore Horn.	Rear Horn.	Fore Horn.		
$3\frac{1}{2}$	2	$1\frac{5}{8}$	$1\frac{5}{8}$	$1\frac{1}{4}$	$2\frac{1}{2}$	India .	H.R.H. Duke of Saxe-Coburg and Gotha.
$3\frac{1}{2}$	2	$3\frac{1}{8}$	$1\frac{7}{8}$	$1\frac{7}{8}$	$1\frac{5}{8}$	Cent. Prov.	C. F. Egerton.
$-3\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{3}{4}$	2	$2\frac{1}{8}$	$1\frac{7}{8}$	...	Bombay Natural History Society's Museum.
$3\frac{3}{8}$	$2\frac{1}{4}$	$2\frac{5}{8}$	$1\frac{3}{4}$	2	$\frac{1}{4}$	Cent. Prov.	C. D. Twopeny.
$-3\frac{3}{8}$	...	...	...	...	...	Kathiawar	Lieut.-Col. L. L. Fenton.
$3\frac{1}{8}$	$1\frac{7}{8}$	$1\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{5}{8}$	$1\frac{1}{8}$	N.W. Prov.	Capt. R. B. Fell.

Notes on the Dwarf Antelopes of the Genus Madoqua.

[From *P.Z.S.*, 1894, Part ii. p. 323.]

By Oldfield Thomas, F.Z.S.

The genus *Madoqua* (by which name, as Mr. Sclater has pointed out, *Neotragus* of most authors should be known),* consists up to the present of three species—*M. saltiana*, Blainv., from Abyssinia, *M. kirki*, Günth, from South Somali and East Africa, and *M. damarensis*, Günth.,† from Damaraland. During the recent opening up of the fauna of Somaliland, the North Somali specimens, without any very detailed comparisons, have been referred to *M. saltiana*, and the Central Somali ones to *M. kirki*, these being indeed their nearest allies in each case; but now, on a careful examination of the whole genus, which has been helped by the further material recently collected by Capt. H. G. C. Swayne, and presented to the Museum by Mr. Sclater, I have come to the conclusion not only that these two are each different from the species to which

* *Madoqua*, Ogilb. P.Z.S. 1836, p. 137. Type *M. saltiana*, Blainv. *Neotragus*, Gray et auct. plurim. (nec H. Sm. in Griff. An. King. iv. p. 269. Type *N. pygmæus*, L.). The genus which has hitherto borne the name of *Nanotragus*, Sund. (1846), must therefore now be known by that of *Neotragus*.

† Mr. True, in his paper on the Mammals of Kilima'njaro (P.U.S. Nat. Mus. xv. p. 477, 1892), has suggested that *M. kirki* and *M. damarensis* are the same, and uses for them the latter of these two names, unaccountably as it appears to me, *kirki* having been the first described. In my opinion, however, *M. damarensis* is really distinct from *M. kirkii*, being considerably larger than the latter, as may be seen by the synopsis and measurements given below.

they have been respectively referred, but also that there is a third Somali species, different again from the other two. I have therefore now to describe all three species as new.

It happens most unfortunately that a good deal of the material before me has been collected by sportsmen who have not been trained as professional collectors, and who, in crossing the ranges of the three Somali species, have killed and brought home a number of skins and skulls, but the exact reference of these each to the other is not always quite certain. By care in the selection of type specimens, however, risk of error from this cause is minimised, much as it has added to my difficulties in working out the genus.

The genus is readily divisible into two very distinct groups, of which *M. saltiana* and *M. kirki* are respectively typical; the characters that divide them are practically those brought out by Dr. Günther in his description of the latter,* at least so far as the skulls and teeth are concerned.

The first species to be described belongs to the *kirki* section, and of this, which I propose to name in honour of Dr. Günther, who first described the remarkable cranial peculiarities of the members of the section, the Museum possesses the following material:—

a. Immature skull, ♂. Central Somaliland. E. Lort-Phillips. B.M. 86.11.19.2.†

b. Adult skull, ♀. Central Ogaden, 3000 feet, Aug. 1893. Capt H. G. C. Swayne. 94.2.21.18. *Type.*

c, d. 2 ad. skins, ♀. Central Ogaden, 3000 feet, Aug. 1893. Capt. H. G. C. Swayne. 94.2.21.16,17.

Taking as the type the skull *b*, which in all probability belongs to one or other of the skins *c, d*, the species may be briefly diagnosed as:—

MADOQUA GUENTHERI, sp. n.

Essential characters of *M. kirki*, but the lower, premaxillary part of muzzle much longer and narrower, while the nasals are much shorter. Tip of nasals, and also the front edge of the upper part of the secondary process of the maxillæ, where it meets the nasals, level with the front edge of p. 4 instead of p. 2. Premaxillæ not reaching to nasals. Breadth of muzzle halfway between gnathion and p. 2 less than a

* *P.Z.S.* 1880, p. 17.

† The skull mentioned by Sclater, *P.Z.S.* 1886, p. 504. The skin referred to at the same time, as is clearly shown by its size and other characters, did not really belong, as was supposed, to this skull, but to another younger one (86.11.19.3), and is referable to the species described below as *M. phillipsi*.

TABLE OF SKULL MEASUREMENTS (IN MILLIMETRES).

Species	*M. saltiana.*	*swaynei.*	*phillipsi.*	*damarensis.*	*kirki.*	*guentheri.*
No.	69.10.24.4.	94.2.21.20.	88.6.20.7.	79.12.28.1.	79.12.18.2.	94.2.21.18.
Sex	♂	♂	♂	♀	♂	♀
Basal length	96	77·5	82·6	...	90·5	97
Greatest breadth . . .	55·2	48·2	51·7	(*c*) 56	53·5	51·6
Nasals, length	23·6	15	19	21·7	12·2	17·5
Nasals, combined breadth . .	20	14·9	16	18·1	14·5	15·5
Interorbital breadth (on frontals)	41·5	35	36·2	41·5 *	38	36
Intertemporal breadth . .	39	36	38·7	42	37·5	40
Breadth of brain-case . . .	40·2	37·4	38·5	44·5	38·5	41·5
Gnathion to junction of nasals and maxillæ (or premaxillæ) .	32	27·5	28	37	35·5	42·3
Gnathion to orbit	53·5	41	46	56·5	51·2	53·5
Gnathion to front of alveolus of p. 2	27·5	21	22·5	30	25	28·2
Length of upper molar series .	35	31	33	38	35·2	33

* Taken so as to be correctly comparable with the corresponding measure in other species; but there is in *M. damarensis* a peculiar notch on each side along the junction between the frontals and maxillæ, so that the true frontal interorbital measure is only 35·7.

quarter the distance between these two last-named points, while in *M. kirki* this breadth is about one-third. Teeth rather smaller than in *M. kirki*. $\overline{\text{M. 3}}$ with the additional third lobe found in *M. kirki* and *damarensis*, but it is decidedly smaller than in either of these species.

For dimensions of the typical skull, see table, p. 103.

Externally, the species, as judged by the skins *c* and *d*, is coloured almost precisely as in *M. kirki*, and the only obvious difference is that the snout is far more elongated and proboscis-like, and fully justifies the remarks on its extraordinary length often made by Somali sportsmen, remarks which, taking them as applied to *M. kirki*, have always appeared to be somewhat exaggerated.

The function of the proboscis is as yet quite unknown, but one might put forward as a suggestion the possibility of its being of service in searching for bulbs under the surface of the soil.

The second species, which I propose to name in honour of Mr. E. Lort-Phillips, who was the first to obtain it, and to whom the Museum is indebted for so much interesting Somali material, belongs to the *M. saltiana* group, distinguished by the absence of the third lobe on $\overline{\text{M. 3}}$ and by its less specialised muzzle.

Of this, which has hitherto been put down as *M. saltiana*, there are before me the following specimens :—

a, *b*. Adult ♂ and ♀, in spirit. Dobwain, in the Maritime Hills—*Proc. Zool. Soc.*, 1894, No. XXII.
40 miles south of Berbera, Jan. 1888. E. Lort-Phillips. 88.6.20.7,8. *a* the type.
c. Imm. skin,* ♂. "Central Somali." E. Lort-Phillips. 86.11.19.2.
d. Young skull (probably belonging to *c*). E. Lort-Phillips. 86.11.19.3.
e-i. 2 skins and 3 skulls. Berbera. Capt. H. G. C. Swayne. 93.12.1.8,9; 94.2.21.12, 13, and 19.

As compared with Abyssinian examples of *M. saltiana*, the following are the characteristics of

MADOQUA PHILLIPSI, sp. n.

Size decidedly smaller than in *M. saltiana* (see skull measurements below). Back finely grizzled ashy gray; sides, shoulders, and limbs bright rufous ("cinnamon," Ridgway), as compared with the faint rufous of the shoulders and limbs of *M. saltiana*. Head colours and markings apparently as usual.

Dimensions of the type, an adult male in spirit :—Head and body

* The skin mentioned by Sclater, *l.c.*

470 mm., hind foot to base of hoof 159, ear from notch 59. For skull measurements, see table, p. 103.

Hab. Northern half of Somaliland.

This, the ordinary "Dik-Dik" of Northern Somaliland, seems to be very common throughout its range. Capt. Swayne tells me that during every day's march they are constantly being put up and shot, exactly like the common European hare, the habits of which they closely imitate.

Although undoubtedly very closely allied to the Abyssinian species, its differences, both in size and colour, appear to be so marked and so constant that I no longer feel justified in assigning it to that form. The name of *M. saltiana* should therefore be entirely struck out of the list of the Somali fauna.

Lastly, we have to deal with a species which, found, like *M. phillipsi*, near Berbera, is there well known as distinct both to sportsmen and natives, and has a different local name. I propose to name it after the enthusiastic naturalist and sportsman who first drew my attention to its distinctness, and whose notes on it have been already published in the "Proceedings."

MADOQUA SWAYNEI, sp. n.

Colour approximately as in *M. saltiana;* size less than in *M. phillipsi*, and therefore far less than in *M. saltiana.* Colour of back gray, with a strong fulvous suffusion ("isabella" of Ridgway seems the nearest, but is not yellowish enough). Limbs rufous, and sides faintly so, but very different from the strong well-defined rufous of *M. phillipsi.*

Of this species the Museum has three skins, brought home by Capt. Swayne from Berbera, and of these No. 94.2.21.15 is selected as the type.

The measurements are as follows:—Head and body (*c*) 500 mm., hind foot without hoofs 149, length of hoofs 22.

Besides the skins, one skull of Capt. Swayne's (94.2.21.20) and another one (85.11.16.3), collected at Girbatir, North Somali, by Herr Menges, are referred provisionally to this species, and the measurements of the former given in the table on p. 326.

Capt. Swayne tells me that the native name of *M. swaynei* is "Guyu," of *M. phillipsi* "Gol-ass," and of *M. guentheri* "Gussuli."

The following rough synopsis of the species of *Madoqua* will help to summarise the results arrived at:—

A. Last lower molar without a third lobe; upper line of premaxillæ slanting, scarcely curved. Proboscis less developed.

a. Back yellowish, or fulvous gray, sides scarcely more rufous.

a^1. Size larger, basal length of skull 95 mm. Abyssinia. 1. *M. saltiana*, Blainv.

b^2. Size smaller, basil length of skull about 78 mm. North Somali. 2. *M. swaynei*, Thos.

b. Back gray, sides and shoulders rich rufous or cinnamon; size intermediate between last two (skull 84 mm.). North Somali. 3. *M. phillipsi*, Thos.

B. Last lower molar with a third lobe; upper line of premaxillæ S-shaped. Proboscis more developed.

c. Tip of nasals about level with front edge of anterior premolar, about 33 mm. from end of premaxillæ (gnathion).

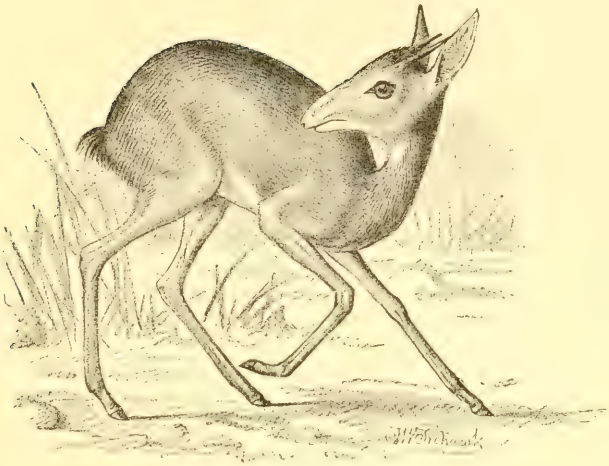
c^1. Back of orbit to gnathion about 86 mm. Damaraland. 4. *M. damarensis*, Günth.

d^2. Back of orbit to gnathion about 76 mm. South Somali to Kilima'njaro. 5. *M. kirki*, Günth.

d. Tip of nasals about level with back of middle premolar and about 42 mm. from gnathion.

e^2. Plateau of Central Somaliland. 6. *M. guentheri*, Thos.

P.S. (13th *April* 1894).—Since this paper was read, Dr. E. Donaldson Smith has presented the British Museum with further examples of the two Northern Somali species—*M. phillipsi* (from Milmil, 1894) and *M. swaynei* (also from Milmil).



KIRK'S DIK DIK (Madoqua kirki).

Distribution—Southern Somaliland, East Africa.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
3	...	$1\frac{1}{2}$	East Africa . .	F. J. Jackson.
$2\frac{3}{4}$	...	$1\frac{5}{8}$	Do. .	British Museum.
$2\frac{5}{8}$	...	$1\frac{1}{2}$	Do. . .	Sir Robert Harvey, Bart.
$2\frac{5}{8}$	$1\frac{1}{2}$	$1\frac{5}{8}$	Kilima'njaro .	H. C. V. Hunter, British Museum.
$2\frac{5}{8}$	...	$1\frac{3}{4}$	East Africa . .	Sir Robert Harvey, Bart.
$2\frac{1}{2}$	$1\frac{1}{2}$	...	North Kassala .	Col. Ralph Vivian.
$2\frac{1}{2}$	...	$1\frac{5}{8}$	East Africa .	Hon. Walter Rothschild.
$2\frac{1}{2}$	...	$1\frac{3}{8}$	Do. . .	Rowland Ward.
$2\frac{3}{8}$	...	$1\frac{3}{8}$	Island of Manda .	Sir John Kirk, M.D., K.C.B.

SOMALI DIK DIKS.

Madoqua phillipsi.

Madoqua swaynei.

General native name, *Sakáro.*

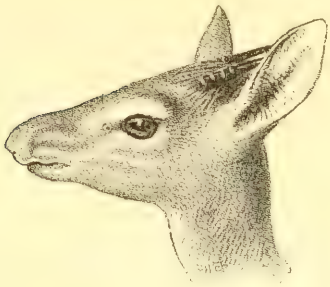
HEIGHT at shoulder about 14 inches. WEIGHT, ♂ 6 lbs.; ♂ 5 lbs. (T. W. H. Clarke).

Sakáro Guyu (*Madoqua swaynei*). *Distribution*—Berbera District.

Sakáro Gol-Ass (*Madoqua phillipsi*). „ Northern half of Somaliland.

Sakáro Gussuli (*Madoqua guentheri*). „ Plateau of Central Somaliland.

Length on outside curve	Circumference.	Tip to Tip.	Habitat.	Owner.
$3\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{5}{8}$	Somaliland . .	J. Kenneth Foster.
$3\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{3}{4}$	Do. . .	W. W. Ashley.
$3\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$	Do. . .	Major C. F. Blane.
3	$1\frac{1}{2}$	...	Do. . .	Col. Arthur Paget.
$2\frac{7}{8}$	$1\frac{3}{8}$	$1\frac{5}{8}$	Do. . .	Lord Delamere.
$2\frac{3}{4}$	1	1	Do. . .	T. W. H. Clarke. (See above.)
$2\frac{1}{2}$	1	$1\frac{3}{8}$	Do. . .	Capt. H. G. C. Swayne.
$2\frac{3}{8}$	$1\frac{1}{2}$	...	Umburen, Somaliland	C. Liddell.



SALT'S DIK DIK (Madoqua saltiana).

Distribution—Coast range of Abyssinia (Sclater and Thomas).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
3	1	1	Abyssinia . .	Sir Edmund G. Loder, Bart.
$2\frac{3}{4}$	1	1	Do. . .	Rowland Ward.
$2\frac{5}{8}$	...	$1\frac{3}{16}$	Do. . .	Sir Victor Brooke's Collection.
$2\frac{3}{8}$	$1\frac{3}{16}$	$1\frac{5}{16}$	Do. . .	Do.
$2\frac{3}{8}$	...	$1\frac{5}{16}$	North-East Africa	British Museum.

ZANZIBAR ANTELOPE (Nesotragus moschatus).

HEIGHT at shoulder about 13 inches.

Distribution—Islets in Zanzibar Harbour and the coast districts of the mainland from Kilima'njaro southwards to Mozambique (Sclater and Thomas).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$3\frac{1}{4}$	$1\frac{1}{2}$	2	Coral Islands, Zanzibar	Sir John Kirk, M.D., K.C.B.
$3\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	Zanzibar . .	Capt. Speke, British Museum.
$3\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	Do. . .	Dr. Kirk, British Museum.
$2\frac{5}{8}$	$1\frac{1}{4}$	$1\frac{3}{4}$	Do. . .	Sir Victor Brooke's Collection.

LIVINGSTONE'S ANTELOPE (Nesotragus livingstonianus).

HEIGHT at shoulder about $13\frac{3}{4}$ inches.

Distribution—South-East Africa, from Mozambique to Zululand (Sclater and Thomas).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-4\frac{1}{2}$	...	...	..	O. R. Dunell.
$4\frac{3}{8}$	$2\frac{1}{8}$	...	Gungunhama's Country	H. T. Glynn, British Museum.
$-4\frac{3}{8}$	...	...	Delagoa Bay .	F. H. Barber's Collection.
-4	..	...	...	C. T. Jones.
$3\frac{3}{4}$	$1\frac{3}{4}$	2	...	C. D. Rudd.
$3\frac{1}{16}$	2	...	Northern Zululand	A. H. Neumann, British Museum.

♂ Oribi from Pungwe District, South-East Africa.

CAPE ORIBI ANTELOPE (Ourebia scoparia).

This charming little antelope is still plentiful upon open grassy plains in many parts of South Africa. Often, when the gunner is in search of francolin, or bustards, with the aid of a pointer, steadily beating some big flat, an Oribi, which has been squatting like a hare, will leap up from its form and flash away at immense speed, springing occasionally from side to side. If the gunner, as often happens, is close enough, a charge of shot will bowl the little buck over and add a plump, if diminutive, piece of venison to the bag. In Natal and Zululand the Oribi is very familiar. In the eastern parts of the Cape Colony it used to be chased with greyhounds, before which it gave excellent sport.

HEIGHT at shoulder about 24 inches.

Distribution—Natal and Zululand, the Transvaal, Eastern districts of the Cape Colony and the Orange Free State, Matabeleland and Mashonaland, and south of Zambesi. Slightly varied forms of this Antelope are found north of the Zambesi.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
6	$2\frac{1}{8}$	$2\frac{1}{4}$	Spitzkop . .	H. T. and A. H. Glynn.
$5\frac{1}{2}$	$1\frac{7}{8}$	3	Pungwe River .	G. L. Bonham.
–5	2	$2\frac{5}{16}$	Barberton . .	Dr. Percy Rendall.

CAPE ORIBI ANTELOPE (Ourebia scoparia)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$4\frac{5}{8}$	$1\frac{3}{4}$	$3\frac{1}{2}$	Manica Plateau, north of the Zambesi	F. C. Selous.
$4\frac{3}{4}$	2	$2\frac{1}{2}$	Cape of Good Hope	British Museum.
$4\frac{3}{4}$	$1\frac{3}{4}$	2	Manica Plateau .	F. C. Selous.
$-4\frac{1}{2}$	...	$2\frac{1}{8}$	Kalamba . .	F. V. Kirby.
$4\frac{1}{4}$	$1\frac{5}{8}$	$2\frac{1}{2}$	Pungwe River .	A. Cameron.
$4\frac{1}{8}$	...	$2\frac{7}{8}$	...	Rowland Ward.
$3\frac{3}{4}$	$1\frac{3}{4}$	$2\frac{3}{8}$	Mashonaland .	Sir J. Willoughby, Bart.

WEST AFRICAN ORIBI (Ourebia nigricaudata).

Type—British Museum.

HEIGHT at shoulder 20 inches.

Distribution—River Gambia, open country of Senegal.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
3	$1\frac{5}{8}$	$2\frac{3}{4}$	River Gambia .	Charles B. Mosse, British Museum.

HAGGARD'S ORIBI (Ourebia haggardi).

Type—British Museum.

HEIGHT at shoulder about 24 inches.

Distribution—East African coast near Lamu (Sclater and Thomas).

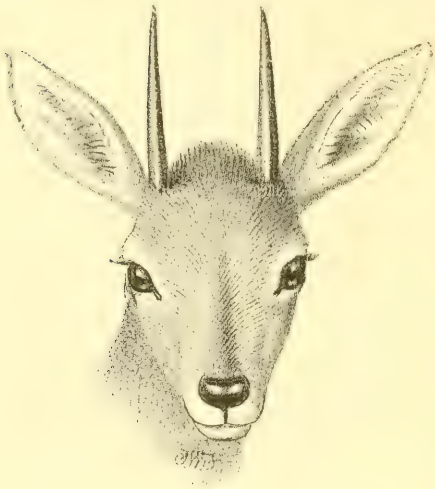
Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$5\frac{1}{8}$	$2\frac{1}{4}$	2	East Central Africa	Hon. Walter Rothschild.
$4\frac{5}{8}$	2	$2\frac{1}{4}$	East Africa . .	F. J. Jackson.
$4\frac{1}{8}$	$1\frac{3}{4}$	$2\frac{1}{2}$	Do. . .	Do.

ABYSSINIAN ORIBI (Ourebia montana).

HEIGHT at shoulder, $22\frac{1}{2}$ inches (W. T. Blanford).

Distribution—Abyssinia and Bongoland.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$4\frac{3}{8}$	$1\frac{3}{4}$	$2\frac{1}{2}$	Dembelas, Abyssinia	British Museum.
$3\frac{1}{4}$	2	$2\frac{1}{4}$	Bahr-el-Salaam, Soudan	Lieut.-Col. the Hon. W. Coke.



STEINBUCK (Raphicerus campestris).

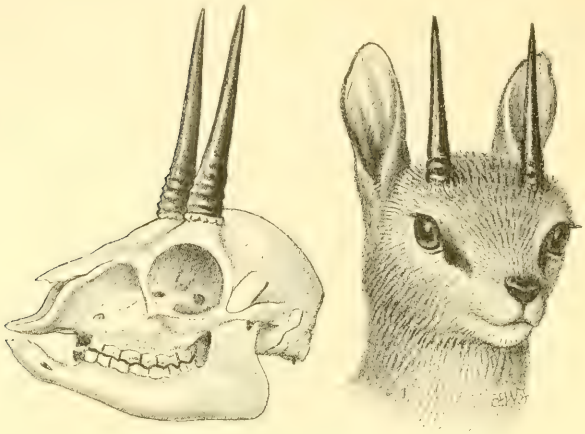
The Steinbuck, notwithstanding the extermination of other South African game, manages to hold its own with a pertinacity that is really astonishing. Wherever you go in the veldt, you may be almost certain to encounter this handsome little antelope. With the inevitable duiker it may be classed as the most familiar game animal of the wilderness. Many and many a time have the hunter and traveller owed their supper to the presence of this welcome little antelope—pretty certain to be encountered somewhere on the line of march. Like the duiker and some of the large antelopes, the Steinbuck has the faculty of being able to exist for long periods without water. In the very heart of the most waterless recesses of the Kalahari both this animal and the duiker are extremely numerous. The presence of a Steinbuck is assuredly no guarantee that water exists within fifty miles. This antelope, in addition to affording sport with the shot-gun—and occasionally the rifle—is hunted with foxhounds, and coursed with greyhounds.

HEIGHT at shoulder, 19 to 23 inches.

Distribution—Common on the open flats and grassy slopes of South Africa, from Cape Town to the Zambesi; also on the Cunene River District, West Africa, as well as some parts of East Africa.

STEINBUCK (Raphicerus campestris)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-5\frac{7}{8}$	...	...	Kikumbulin .	W. Russell Bowker.
$5\frac{3}{8}$	2	$1\frac{3}{4}$	East Africa . .	E. Gedge.
5	...	$2\frac{1}{2}$	Do. . .	Sir John Willoughby, Bart.
$4\frac{7}{8}$	$1\frac{3}{4}$	$1\frac{7}{8}$	South Africa .	Dr. Bainbrigge.
$4\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{5}{8}$	Do. . .	H. and C. Beddington.
$-4\frac{1}{2}$	...	...	Matabeleland .	T. E. Buckley.
$4\frac{1}{2}$	$1\frac{5}{8}$	$2\frac{5}{8}$	South Africa .	F. C. Selous.
$-4\frac{1}{2}$	$1\frac{7}{8}$	$3\frac{1}{2}$	Barberton Plain .	Dr. Percy Rendall.
$4\frac{3}{8}$	$1\frac{5}{8}$	$2\frac{3}{8}$	Tana River, East Africa	Sir Robert Harvey, Bart.
$-4\frac{3}{8}$	...	...	...	Capt. A. St. H. Gibbons.
$4\frac{1}{8}$	$1\frac{7}{8}$	$2\frac{1}{4}$	Soudan . .	Col. Ralph Vivian.
$4\frac{1}{8}$	$1\frac{5}{8}$	$2\frac{3}{8}$	Kaokoland, West Africa	Capt. F. Cookson.
$-4\frac{1}{8}$	...	...	...	C. T. Jones.
4	$1\frac{3}{4}$	$1\frac{3}{4}$	Pretoria . .	Julius Jeppe.
4	$1\frac{3}{8}$	$2\frac{1}{4}$	East Africa . .	Sir Robert Harvey, Bart.
$3\frac{7}{8}$	$1\frac{1}{2}$	$2\frac{3}{4}$	Do. . .	Capt. R. A. J. Montgomerie, C.B., R.N.
$3\frac{7}{8}$	$1\frac{1}{2}$	$2\frac{1}{2}$	Do. . .	J. Gardiner-Muir.
$3\frac{5}{8}$	$1\frac{3}{4}$	$2\frac{3}{4}$	Do. . .	H. T. and A. H. Glynn.
$3\frac{5}{8}$	$1\frac{3}{8}$	$2\frac{1}{8}$	Zululand . .	Capt. L. O. Williams.
$3\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{4}$	East Africa . .	F. J. Jackson.
$3\frac{3}{8}$	$1\frac{1}{2}$	$2\frac{1}{2}$	Transvaal . .	British Museum.
$3\frac{3}{8}$	...	$2\frac{3}{4}$	Near Kilima'njaro, East Africa	H. C. V. Hunter, British Museum.



Shot in Somaliland by Capt. H. G. C. Swayne.

KLIPSPRINGER (Oreotragus saltator).

Somali name—" Alakud."

This hardy and most graceful little mountaineer affords the best mountain shooting to be obtained in Africa. The sight of a pair of Klipspringers, springing like balls of indiarubber up some sheer cliff or difficult mountain-side, apparently without the least effort in the world, or leaping downwards from ledge to ledge or pinnacle to pinnacle, is a thing never to be forgotten. To bag Klipspringer, however, the gunner must be prepared, especially among the steep and difficult mountain ranges of the Cape Colony, for a long and arduous stalk under a hot sun. To this difficulty of approach, indeed, as well as to its own wary and suspicious nature, the Klipbok owes much of its immunity. The Boers, who are not fond of mountain work, seldom pursue it—unless hard up for saddle-stuffing, for which this antelope's brittle coat is famously adapted—and the Klipspringer in consequence is still fairly abundant all over South Africa, and thence, in mountainous regions, right away to Abyssinia. Klipspringer venison is excellent.

It is only encountered in one place in East Africa, *i.e.* Mount Elgon and the hills in its vicinity, very shy and active, and frequenting the steep rocks. Will probably be found throughout the Turkwell country and in the hills forming the El Koromorj Range which runs northward to the country of Ngaboto, Lake Nyassa.

HEIGHT at shoulder, 1 foot $6\frac{1}{4}$ inches (Dr. Percy Rendall).

Distribution—Scarce in mountain ranges of Southern Africa around Capetown and Simonstown, Bechuanaland, the Transvaal, Matabeleland, Uganda (Teita to Turkwell); also Somaliland, Nyassaland, Abyssinia.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$5\frac{3}{8}$	$2\frac{1}{8}$	$2\frac{7}{8}$	Mashonaland . .	The late H. H. Eyre.
$5\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{5}{8}$	Transvaal . . .	F. V. Kirby.
$4\frac{1}{2}$	$2\frac{3}{16}$	$2\frac{11}{16}$	Wittberg, Cape Colony .	H. A. Bryden.
$4\frac{1}{2}$	2	$3\frac{1}{4}$	British East Africa . .	E. Gedge.
$-4\frac{1}{2}$	...	...	Barberton . . .	Dr. Percy Rendall.
$-4\frac{1}{2}$	2	...	South Africa . . .	Lionel Phillips.
$4\frac{3}{8}$	2	$3\frac{1}{4}$	Portuguese possessions between Mashonaland and Tete on the Zambesi	F. C. Selous.
$4\frac{1}{8}$	$2\frac{1}{2}$	$1\frac{3}{4}$	North Nyassaland . .	James Yule.
4	$2\frac{1}{2}$	$1\frac{7}{8}$	South Africa . . .	H. and C. Beddington.
$-3\frac{1}{4}$	$1\frac{3}{4}$	4	Do. . . .	Dublin Museum.
$3\frac{7}{8}$	$2\frac{1}{8}$	2	Do. . . .	A. Beit.
$3\frac{3}{4}$	2	$2\frac{1}{4}$	East Africa . . .	J. Gardiner-Muir.
$3\frac{3}{4}$	$1\frac{3}{4}$	$2\frac{3}{8}$	Somaliland . . .	Prince Boris Czetwertynski.
$3\frac{3}{4}$	2	2	Do. . . .	T. W. H. Clarke.
$3\frac{3}{4}$	...	$1\frac{7}{8}$	Abyssinia . . .	British Museum.
$3\frac{1}{4}$	...	...	Somaliland . . .	Capt. H. G. C. Swayne.

GRYSBUCK (Raphicerus melanotis).

HEIGHT at shoulder, 22 inches.

Distribution—North of the Limpopo, Macloutsie, and Letaba River District.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-3\frac{1}{4}$	...	...	Limpopo . .	C. T. Jones.

Drawn from a specimen shot at Somaliland.

WATERBUCK (Cobus ellipsiprymnus).

Swahili name—" Kuru."

The noble-looking Waterbuck Bull, with its extremely handsome head and horns, is one of the prizes of the South African hunter. Never inordinately plentiful, this antelope has of late years been greatly reduced in its range. Perhaps the best region in which nowadays to seek the *Kring-Gaat*, as the Boers term it, is in the unhealthy country between the Sabi and Zambesi rivers, or upon the affluents of the Upper Zambesi, or on the Chobe, the Okavango, and other systems above Lake Ngami. Except for the fine horns of the male, the Waterbuck is of little use to European sportsmen, the females being hornless,

and the flesh of the animal quite uneatable. The Boers, however, set great value upon the skin, which is much used for velschoens (home-made shoes) and other purposes, and the Waterbuck is greatly persecuted in consequence.

HEIGHT at shoulder about 48 inches. One shot in Masailand by Count Felice Scheibler—height, about 13 hands; circumference of the neck, 38¼ inches.

Distribution—Northern Transvaal, Zambesi, Matabeleland, west of the Crocodile River, Nyassaland; and Somaliland, south of Lake Baringo. Common throughout East Africa, both in plateau and lowlands (E. Gedge).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–36½	...	...	Delagoa Bay .	F. H. Barber.
–36¼	...	...	South Africa .	O. R. Dunell.
–34½	...	...	River Limbobo .	H. T. and A. H. Glynn.
–33½	10⅛	21⅜	South-East Africa	F. V. Kirby.
33½	9¼	21½	South Africa .	Hon. Walter Rothschild.
33	9⅜	11½	Mashonaland .	F. C. Selous, British Museum.
33	8¾	24	Do. . .	J. G. Millais.
32¾	9¾	21⅜	South Africa .	Sir Victor Brooke's Collection.
31¾	9¼	24	Zululand . .	Capt. L. O. Williams.
31⅜	8½	21⅞	...	British Museum.
31¼	9⅝	19¼	...	Sir Edmund G. Loder, Bart.
31	...	...	Hanyani River, Mashonaland	F. C. Selous.
30½	8¾	25	Pungwe River .	R. Hughes.
30⅜	9⅛	23½	Zululand . .	A. J. Brandon.
30	8¾	24	Do. . .	Rowland Ward.
29⅞	9⅛	12⅞	Do. . .	Hon. Charles Ellis.
29⅜	9⅜	...	Do. . .	A. H. Neumann.
29	9	16	South Africa .	Lieut.-Col. the Hon. W. Coke.
–29	8½	19	East Africa . .	T. E. Buckley.
29	9	14⅝	Pungwe River .	Capt. F. H. Lehmann.

WATERBUCK (Cobus ellipsiprymnus)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
29	9½	26	East Africa . .	E. Gedge.
29	9½	16½	Do. . .	Major W. H. Williams.
28⅞	9	21	Do. . .	Rowland Ward.
28¾	8	15¼	South Africa .	G. H. Banks.
28¾	8	27	Shiré River . .	H. H. Williams.
28¾	9⅛	21⅜	...	H.R.H. Duke of Saxe-Coburg and Gotha.
28½	8¼	...	Shiré River . .	Surgeon Dowson, R.N.
28½	8¾	15¼	Pungwe River .	Viscount Ennismore.
28	...	18	East Africa . .	Sir John Willoughby, Bart.
28	8½	13½	Pungwe River	Durban Museum.
27¾	9¼	14¾	East Africa . .	F. J. Jackson.
27¾	8¾	10½	Barberton . .	Dr. Percy Rendall.
27⅝	8	9⅞	Zululand . .	Major-Gen. Arthur Ellis, C.S.I.
27½	8¾	22	South Africa .	D. Norman Ritchie.
27¼	9¼	13½	East Africa . .	J. Gardiner-Muir.
27¼	9	11¼	South Africa .	Frank Harris.
27	8	17¾	Pungwe River .	Ford G. Barclay.
27	7¼	34½	Zambesi . .	Comdr. A. T. Hunt, R.N.
26½	8½	15½	Mashonaland .	Count Felice Scheibler.
26½	7½	15¾	Pungwe River	A. Cameron.
26⅝	10⅞	18	South Africa .	C. D. Rudd.
26	8	17½	Do. . .	Dublin Museum.
25⅞	8⅝	17½	Soudan . .	Col. Ralph Vivian.
25⅝	8¼	11	East Africa . .	Capt. Speke, British Museum.
25¼	8¾	13⅞	Do. .	Sir Robert Harvey, Bart.
25¼	8	13⅝	Do. . .	H. C. V. Hunter.
24¼	7½	9¾	Webbe-Shebeyleh, Somaliland	W. D. James.

WATERBUCK (Cobus ellipsiprymnus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
22¾	6⅝	15¼	Somaliland . .	Capt. H. G. C. Swayne.
22¼	7½	12⅞	Do. . .	A. H. Straker.
22	7¼	9¼	Do. . .	Prince Demeter Ghika.
–21 11/16	8¼	14½	East Africa . .	L. Decle., Paris Museum.
21⅜	7⅝	13¾	Cape Delgado .	Sir John Kirk, M.D., K.C.B.
21	8¼	12½	East Africa . .	H. Charrington.
–19⅜	7¼	9¼	Webbe-Shebeyleh, Somaliland	P. H. G. Powell-Cotton.
19⅛	7⅜	9⅝	Do.	Col. Arthur Paget.
18¾	7	10⅛	Do.	Lord Wolverton.

PENRICE'S WATERBUCK.

By THE HON. WALTER ROTHSCHILD.

[From *Novitates Zoologicæ*, vol. v. February 1895.]

Cobus penricei sp. nov.

At once distinguishable from its allies, *Cobus ellipsiprymnus*, *C. defassa*,* and *C. unctuosus*, by its intensely blackish colour. The muzzle is whitish, the face black, interspersed with rufous hairs between the horns. The usual white stripe passes from in front and over the eye to the base of the horns. Ears—outside, rufous brown, with blackish tips and edges ; inside, white. Sides of face, neck, and body deep brownish-black, plentifully interspersed with reddish-brown hairs, all of them being white at base, which gives the animal a colour that in a horse is called "blue-roan." This latter colour is more conspicuous on the belly, where the hairs are longer, but much less on the legs and hind half of the back, which parts are almost uniform brownish-black. Tail black above, white below. There is a large patch of white on the upper throat.

The hornless *female* is similar in colour, but the ears are less rufous and more brown.

The horns are much shorter than those of its three allies, and

* The name must be spelt *defassa*, and not *defassus*, as *defassa* is a native name. It is, however, spelt *defassus* in several books, and also on the plate, by mistake.

stouter in proportion. Their rings are closer together than on the horns of *C. ellipsiprymnus* and *C. defassa*, but in their thickness and depth come nearest to those of *C. defassa*. The skull is much narrower behind the horns than in *C. defassa*, as is also the nasal.

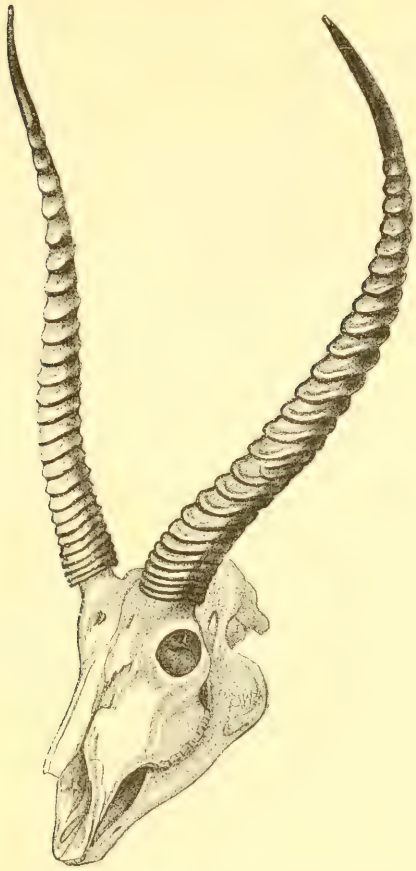
Front legs (in skin), 19 inches; hind legs, 22; ears, $8\frac{1}{2}$ inches; horns along the curve in three bulls, 19, $24\frac{1}{2}$, and 28 inches.

These new Waterbucks were shot by Mr. Penrice near a place known as Bongo, on the banks of the Kuvali River, about one hundred miles south-east of Benguella and about fifty miles from Caconda. Mr. Penrice writes, in a letter to Mr. Rowland Ward: "These antelopes have no white mark over the rump, the only whitish colour being on the belly. They are pretty numerous at the locality named above, but they are not found nearer the coast. They have a strong smell, and I have often smelt them before sighting them. The cows have no horns, and as a rule bulls and cows are found in separate troops. The flesh is good to eat. The Boers call them 'Kringhart,' the same name they give to the waterbuck in the Transvaal."

Type of *male* and *female* in my Museum at Tring.

The species is named in honour of its discoverer.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
29	$8\frac{3}{4}$	$18\frac{1}{2}$	Benguella, 150 miles from coast	G. W. Penrice.
28	8	$22\frac{1}{2}$	Do.	Do.
$24\frac{1}{2}$	8	$9\frac{1}{8}$	Do.	Hon. Walter Rothschild.



Drawn from a specimen in the British Museum.

DEFASSA ANTELOPE (**Cobus defassa**).

HEIGHT at shoulders about 46 inches.

Distribution—Central East Africa, from near Lake Baringo west to Uganda, Western Abyssinia, Senaar, Kordofan, and the Nile Valley.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
– 29	$9\frac{1}{2}$	$17\frac{1}{2}$	...	Dublin Museum.
$27\frac{3}{8}$	$8\frac{1}{8}$	$13\frac{1}{2}$	...	British Museum.

DEFASSA ANTELOPE (Cobus defassa)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
27¼	7½	18¼	River Atbara, Abyssinia	British Museum.
26⅞	7¾	15⅛	Uganda . .	Capt. Speke, British Museum.
26¾	8⅝	15¼	East Africa . .	E. Gedge.
–26	7⅞	13¾	Borders of Lake Tchad	Paris Museum.
25¾	9	15¾	Bahr-el-Salaam, Soudan	Lieut-Col. the Hon. W. Coke.
25⅛	8⅝	13⅜	British East Africa	Hon. Walter Rothschild.

SINGSING ANTELOPE (Cobus unctuosus).

HEIGHT at shoulder about 42 inches.

Distribution—Senegal, Gambia, and Niger Territory.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
24½	9	12	Gambia . .	Dr. Percy Rendall.
23¾	7¼	14½	Niger . . .	F. Swanzy.
23	7	16	Do. . . .	A. J. Arnold.
22¼	8½	10¾	Do. . . .	Sir Edmund G. Loder, Bart.

WHITE-EARED WATERBUCK (Cobus leucotis).

Distribution—Central East Africa: Uganda and White Nile District.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
21⅝	7⅞	13 13/16	White Nile . .	Paris Museum.
–20	7	7½	Do. . .	Berlin Museum.
19⅞	6⅜	7¼	Bahr-el-Ghazal .	British Museum.
19½	5⅞	9½	Do. . .	Consul J. Petherick, British Museum.
17¼	6	7¼	...	Sir Victor Brooke's Collection.

Drawn from a specimen shot by F. C. Selous on Chobe River, British Museum.

LECHWE ANTELOPE (Cobus lechee).

The Lechwe is quite one of the most interesting, as it is one of the handsomest, of the water-loving antelopes, and affords excellent and often exciting sport for the gunner. Seldom found very far from water, this antelope is most abundant in the lagoons and swamps created by the annual rising of the Upper Zambesi, the Botletli, Chobe, Tamulakan, and other river systems of the interior, in localities where the surrounding flats are inundated for some part of the year. The Lechwe seldom ventures into the deep rivers from fear of the crocodiles, but among the reed-beds, the shallow lagoons, and flooded flats it is a familiar figure. It is often to be found, in the less accessible regions, in vast herds. It is an excellent swimmer, and can progress by a

succession of splashing bounds at great speed through the lagoons and shallows. It is extremely tenacious of life, and requires very straight powder. The thick rufous-yellow coat of the Lechwe is extremely handsome, and the skin is greatly prized by the natives.

HEIGHT at shoulder about $3\frac{1}{2}$ feet.

Distribution—South and Central Africa. In the marshes of the Botletli River, and is very numerous in the open grassy plains, which are always more or less inundated by the Tamulakan, Mābābe, Machabe, Sunta, and Chobe rivers. It is also common along the Upper Zambesi and in the swamps of the Lukanga River, about 150 miles to the south-west of Lake Bangweolo (F. C. Selous), Nyassaland (A. Sharpe).

Length on front Curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-28\frac{1}{2}$	...	...	...	F. H. Barber.
-28	...	...	...	T. Poole (of Kimberley).
$27\frac{1}{2}$	$10\frac{3}{4}$	$19\frac{1}{8}$	Chobe River .	F. C. Selous, British Museum.
$27\frac{1}{4}$	8	$14\frac{3}{4}$	Do. . .	F. C. Selous.
$26\frac{1}{4}$	$8\frac{3}{8}$	21	South Africa .	A. Beit.
$26\frac{1}{8}$	8	15 (about)	Linyanti, Chobe River	F. C. Selous.
$-25\frac{3}{8}$	$7\frac{1}{4}$	$14\frac{1}{2}$	Lake Ngami .	Dr. Percy Rendall.
$-25\frac{3}{4}$	$7\frac{1}{2}$	18	Zambesi . .	T. E. Buckley.
$-25\frac{5}{8}$	$7\frac{1}{2}$	$13\frac{3}{8}$	Do. . .	Dr. Holub, Paris Museum.
$24\frac{1}{2}$	$7\frac{1}{2}$	$11\frac{1}{2}$	South Africa .	Hon. Walter Rothschild.
$24\frac{3}{8}$	$7\frac{5}{8}$	$13\frac{5}{8}$	Do. . .	The late J. S. Jameson.
$-24\frac{1}{4}$	...	...	Zambesi . .	C. T. Jones.
$23\frac{1}{2}$	$7\frac{1}{2}$	$14\frac{1}{2}$	South Africa .	F. C. Selous.
23	9	9	Do. .	E. Gedge.
$22\frac{7}{8}$	$7\frac{1}{4}$	$6\frac{5}{8}$	Do. .	A. Beit.
$22\frac{5}{8}$	$7\frac{3}{8}$	11	Do. .	The late J. S. Jameson.
$22\frac{5}{8}$	$6\frac{5}{8}$	$11\frac{3}{4}$	Chobe River .	F. C. Selous, British Museum.
21	$7\frac{1}{4}$	15	...	A. Beit.
$20\frac{3}{4}$	$7\frac{1}{4}$	$8\frac{1}{2}$	Botletli River, Ngamiland	H. A. Bryden.

KOB ANTELOPE (Cobus kob).

Type—Paris Museum.

Distribution—Niger and Gambia Territory, West Africa.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
18¾	5½	7½	Niger District .	J. S. Brogden.
16¾	6	7	Do. . .	A. J. Arnold.
9½	5	3	Gambia . .	Earl of Derby, British Museum.
8	4⅝	4⅝	Do. . .	Do.

MRS. GRAY'S WATERBUCK (Cobus maria).

HEIGHT at shoulder about 3 feet.

Distribution—Swamps of the White Nile and adjoining rivers (Sclater and Thomas).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
30½	6½	17	...	Berlin Museum.
29¾	6¼	12	...	Hon. Walter Rothschild.
26⅞	6⅞	13¾	Arwan, Bahr-el-Ghazal	Consul J. Petherick, British Museum.
24¾	8⅞	12	White Nile . .	Lieut.-Col. the Hon. W. Coke.

Drawn from a specimen shot by F. J. Jackson.

UGANDA KOB (Cobus thomasi).

Type—British Museum.

Distribution—East Central African Lake Region, Upper Kavirondo, and shores of Victoria Nyanza. Not met with eastwards of Upper Kavirondo—very local—frequents high grass and jungle in the vicinity of rivers and swamps. Found in Uganda and along the Nile, also near the lake in Kavirondo (E. Gedge).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
19¾	7	9⅞	Victoria Nyanza .	E. Gedge.
18½	6⅝	8⅝	Albert Lake .	Capt. F. D. Lugard.
18½	...	...	Lake Victoria .	Major W. H. Williams.
18	7¼	11½	Uganda . .	E. Gedge.
17⅜	6½	7¾	Do. . .	F. J. Jackson.
17¼	7½	5½	Do. . .	Rowland Ward.
17⅛	7	5	Masailand .	F. J. Jackson, British Museum.
17	5 15/16	9⅞	East Africa . .	Paris Museum.
16	5¾	8½	...	Sir Edmund G. Loder, Bart.
16	6⅜	10	East Africa . .	F. H. Barber.

Drawn from a specimen in the British Museum.

POOKOO ANTELOPE (Cobus vardoni).

The Pookoo is an extremely local antelope, which hitherto has been seldom procured by European hunters. Mr. Selous probably knows more about its habits than any living sportsman, and he only encountered this antelope in a narrow belt of country extending about sixty miles westward along the south bank of the Chobe from the junction of that river with the Zambesi. The horns differ considerably, as may be seen by the illustration, from the other waterbucks. In size the Pookoo stands about 3 feet 3 inches, or 3 feet 4 inches, at the shoulder—about the height of a pallah ram. The coat is reddish yellow, somewhat thick like the other waterbucks, and, about the back and loins, long and curly. Mr. Selous states that he never saw more than ten or a dozen in a herd. The females are hornless.

Distribution—South Africa, along the Upper Zambesi from Sesheke to the Barotse Valley, southern bank of Chobe River (F. C. Selous), Nyassaland (A. Sharpe).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$19\frac{1}{8}$	$6\frac{3}{4}$	$8\frac{1}{2}$	South Africa .	J. Carr Saunders.
$18\frac{5}{8}$	...	...	Njoko River .	Capt. A. St. H. Gibbons.
$16\frac{1}{4}$	$6\frac{5}{8}$	$7\frac{1}{2}$	South Africa .	British Museum.
16	$6\frac{1}{2}$	$6\frac{3}{4}$	South bank of Chobe River	F. C. Selous.
$15\frac{3}{8}$	$6\frac{1}{2}$	$6\frac{5}{8}$	Chobe River .	Do.
$15\frac{1}{8}$	6	10	South Africa .	J. Carr Saunders.
15	$6\frac{1}{4}$	$6\frac{1}{4}$	Zambesi . .	T. E. Buckley.
$14\frac{1}{8}$	$6\frac{5}{8}$	$5\frac{1}{8}$	Chobe River .	F. C. Selous, British Museum.
13	$6\frac{1}{2}$	7	N. of Lake Nyassa	S. Pulley.
$12\frac{1}{2}$	6	$1\frac{5}{8}$	Zambesi . .	W. Van Ness.

GRAY or VAAL REHBOK or RHEBOK (Pelea capreolus).

Next to the Klipspringer, the Vaal Rhebok affords the best mountain-stalking in South Africa; and, for the same reason that its downfall is only wrought by the expenditure of much rough and hard climbing, it has hitherto managed to hold its own among the much hunted fauna of the country fairly well. Among the wild and picturesque mountain ranges of the eastern and southern parts of Cape Colony, and in other mountainous regions as far north as the tropic of Capricorn, the gray rhebok affords delightful and most interesting sport. The appearance of this somewhat stilty-looking antelope does not at first sight suggest any wonderful degree of activity. But a troop of six or eight startled Vaal Rheboks, stretching themselves with wonderful smoothness and speed up the rough sides of a steep mountain, will quickly undeceive the novice. The coat of the rhebok—light gray, thick, soft, and woolly as a rabbit—is one of its most curious features. The flesh is poor eating.

HEIGHT at shoulder about 30 inches.

Distribution—Open stony upland hills and spurs of Cape Colony, the Orange Free State, Transvaal, Bechuanaland, portions of Natal, Matabeleland, and Zululand.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–11½	...	...	Spitzkop . .	F. H. Barber.
–11	...	...	...	M. E. Bowker.
10¾	2	2½	Basutoland . .	Julius Jeppe.
–10½	2⅛	4⅝	Transvaal . .	H. T. and A. H. Glynn.
9¼	2½	2¾	Do. . .	Dr. Oakshott.
9	2	3½	Do. . .	Rowland Ward.
–8 15/16	2¾	(single horn)	Barberton . .	Dr. Percy Rendall.
8⅝	2½	2¾	Cape Colony .	R. H. Venables-Kyrke.
8⅝	2½	2⅝	South Africa .	Dr. Burchell, British Museum.
8¼	2	2⅞	...	F. C. Selous.
–8	2	3	Mauchberg . .	F. V. Kirby.
8	...	...	...	C. T. Jones.
7¾	2½	3¾	...	Hon. Walter Rothschild.
7½	2⅜	3	...	H. Atkinson.
7¼	2¼	3½	Basutoland . .	A. Beit.
7	2	2½	...	Capt. H. H. Livingstone.
6¾	2⅜	2¼	Transvaal . .	H. A. Bryden.
6½	2	2¼	...	C. D. Rudd.
6½	2	4⅞	Cradock . .	Capt. F. Cookson.
5½	2	3¾	Zululand . .	A. J. Brandon.

THE LESSER REEDBUCK or ROOI RHEBOK (Cervicapra lalandi).

HEIGHT at shoulder about 28 inches.

The average South African hunter and traveller knows very little of this antelope, and although it is not by any means uncommon to this day in the mountainous parts of Cape Colony, as well as in the Bechuanaland Protectorate, the Transvaal, and elsewhere, very few heads seem to have been brought to this country. The Rooi (red) Rhebok is usually found in much the same kind of rough hilly country as the Vaal Rhebok, but prefers, as a rule, the lower slopes to the highest parts of the mountain. The adult male stands about 2 feet 6 inches at the withers, and bears horns not altogether dissimilar to those of the reedbuck ram. The coat is longish, loose, and of a reddish-brown colour. These animals run in small troops, seldom exceeding a dozen in number, and from their active habits and the difficult hill country they inhabit afford excellent stalking. In the hilly parts of the Marico District, West Transvaal, some good bags of

Rooi Rhebok are often made by Englishmen living in that part of the country.

Distribution—Rare in the Transvaal, but according to Mr. F. C. Selous it is found on the upper portions of the Tati, Shashi, Ramokwebani, and other tributaries of the Limpopo, and in the Matabele and Mashona country on both slopes of the watershed; it is very common along the banks of every river except, of course, in the inhabited parts, where it has been exterminated. Very numerous on the Mābābe, Tamulakan, Machabe, Sunta, and Chobe rivers, on the tributaries of the Zambesi, east of the Victoria Falls, along the Nata River, and the Manica plateau, north of the Zambesi. Fairly common in the eastern and midland district of the colony. Dr. Percy Rendall found it common in De Kaap District of the Transvaal.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$7\frac{3}{4}$	$4\frac{3}{4}$	$4\frac{3}{4}$	...	Hon. Walter Rothschild.
$-7\frac{1}{2}$	...	...	...	H. T. and A. H. Glynn.
$7\frac{3}{8}$	$4\frac{1}{4}$	3	Zululand . .	A. H. Neumann.
$-7\frac{1}{4}$	...	...	...	O. R. Dunell.
$6\frac{3}{4}$	$4\frac{3}{4}$	$4\frac{3}{4}$	...	Bloemfontein Museum.
$6\frac{1}{2}$	4	$3\frac{1}{4}$	Zululand . .	Lieut.-Col. the Hon. W. Coke.
$-6\frac{1}{2}$	$3\frac{3}{4}$	$4\frac{3}{4}$	Barberton . .	Dr. Percy Rendall.
$6\frac{3}{8}$	$4\frac{1}{4}$	$3\frac{7}{8}$	Zululand . .	A. J. Brandon.
$-6\frac{1}{4}$	...	...	...	C. T. Jones.
-6	$3\frac{7}{8}$	$2\frac{7}{8}$	Swaziland . .	T. E. Buckley.
6	4	$3\frac{3}{8}$	Zululand . .	Capt. L. O. Williams.

REEDBUCK (Cervicapra arundinum).

The Reedbuck (Rietbok of the Boers) is much less common in South Africa than it used to be, and to get fairly into the country of this interesting and characteristic water antelope one has nowadays to travel far. Formerly abundant in the eastern part of Cape Colony and Natal, the Reedbuck is now rarely seen until Khama's Country is reached. On the Lotsani River, in Bamangwato, these antelopes are to be found, as well as upon the various northern tributaries of the Limpopo, and upon the middle and lower courses of that river itself. They are extremely abundant upon the river systems of Ngamiland, as well as in the country between Mashonaland and the east coast. As its

name implies, the Reedbuck is extremely fond of the covert afforded by the dense reed-beds of the river systems of the interior. The male stands about 3 feet high at the shoulder. These antelopes run in small families, and are not precarious. Their shrill whistle, raised when excited or alarmed, is not readily forgotten. They afford excellent and not difficult shooting, but the flesh is, as with all the waterbucks, extremely poor.

Distribution—Central South Africa, and wherever there are open, grassy, or reedy valleys intersected by a stream of water; or large reed valleys.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–16⅜	6¾	19½	Mpimbi, British Central Africa	Major F. Trollope.
15⅞	6¼	10½	South Africa .	C. D. Rudd.
15⅞	6¼	14¼	...	British Museum.
15¾	6⅛	...	South Africa	The late J. S. Jameson.
–15½	...	...	Njoko River, Brit. Central Africa	Capt. A. St. H. Gibbons.
–15½	6⅝	15½	Transvaal . .	F. V. Kirby.
–15½	...	16	.	Lord David Kennedy.
15⅛	6⅝	11¼	Manica Plateau, north of Zambesi	F. C. Selous.
15	6½	9¾	Mashonaland .	Sir John Willoughby, Bart.
–15	...	...	...	F. H. Barber.
–15	...	...	...	H. T. and A. H. Glynn.
–15	...	...	...	T. E. Buckley.
–15	...	...	...	Lionel Phillips.
–14¾	6¾	10½	Sabi Flats . .	Dr. Percy Rendall.
14⅝	7⅜	9⅛	...	Hon. Walter Rothschild.
14½	6⅜	7⅝	...	Sir Edmund G. Loder, Bart.
14⅜	5½	16¾	South Africa .	Lieut.-Col. the Hon. W. Coke.
13½	6	9¼	...	Hon. Walter Rothschild.
13½	6¼	6	Pungwe River .	Viscount Ennismore.
13½	6¾	6⅞	South Africa .	Major-General Sir F. C. Carrington, K.C.M.G.
12⅞	5⅝	8	Zululand . .	Capt. L. O. Williams.

REEDBUCK (Cervicapra arundinum)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
12¾	5¼	9¼	Zambesi . .	Comdr. A. T. Hunt, R.N.
12¾	6⅛	8⅜	Near Bubye River	A. M. Sagar-Musgrave.
12	6¾	8¾	Pungwe River .	Capt. F. H. Lehmann.
11¾	5¾	10¼	Benguella . .	G. W. Penrice.
11	6¼	11¼	Zululand . .	A. J. Brandon

An Albino specimen has been recorded by F. V. Kirby.

BOHOR ANTELOPE (Cervicapra bohor).

Distribution—East Africa, on the shores of Lake Jipe, and Zuva to the east of Kilima'njaro (F. J. Jackson).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
13¾	5⅛	8⅛	East Africa . .	British Museum.
13½	5½	4½	Do. . .	Capt. J. R. Macdonald.
12½	5⅝	5⅜	Do. .	Sir John Kirk, M.D., K.C.B., British Museum.
10⅝	4½	5½	Do. .. .	Sir Robert Harvey, Bart.
9¼	4⅞	5⅛	Usongola . .	Capt. F. D. Lugard.
9⅛	5⅜	8½	South Africa? .	Dr. Burchell, British Museum.
9⅛	4⅞	4⅝	Masailand . .	H. C. V. Hunter.
9	5¼	3⅛	Zanzibar . .	Sir John Kirk, M.D., K.C.B.
8¾	5	3⅞	East Africa . .	Sir Robert Harvey, Bart.
8¾	4⅞	3¾	Masailand . .	H. C. V. Hunter.
8¼	4½	5¼	...	Sir Edmund G. Loder, Bart.
8¼	5¾	5	East Africa . .	R. P. Carroll.
8⅛	4¾	2½	Masailand . .	H. C. V. Hunter, British Museum.
7¾	4⅞	2¾	East Africa . .	F. J. Jackson.

Shot by W. Astor Chanler.

CHANLER'S REEDBUCK (**Cervicapra chanleri**, sp. nov.).

DESCRIPTION BY HON. WALTER ROTHSCHILD.

[From *Novitates Zoologicæ*, vol. ii., February 1895.]

This new species belongs to the group of the smaller species of *Cervicapra*, and is nearest to *C. bohor*, but much the smallest of the genus. Perhaps the most striking difference to the ordinary observer is the central black stripe running from the nose to between the eyes. Head and neck generally orange buff, as in *C. bohor;* back, sides of body, upper side of tail, and outer sides of limbs warm buffy gray, instead of being of the same colour as the neck, as in *C. bohor* and *C. redunca.* Belly, underside of tail, and inside of limbs down to the knees white. Just below the knee in front is a dark brown patch. The ears seem to be longer and narrower in proportion than those of *C. bohor;* they are sparingly covered on the outside with short hair of the colour of the neck, and inside thickly lined with long white hair. The horns are very much smaller and thinner than those of *C. bohor*, and much more so, of course, than those of *C. redunca*, both of which are much

more curved forward. The rings on the horns project much more and are much sharper than in my specimens of *C. bohor* and *C. redunca*, and are also much more regular. They are five in number, besides the basal ring.

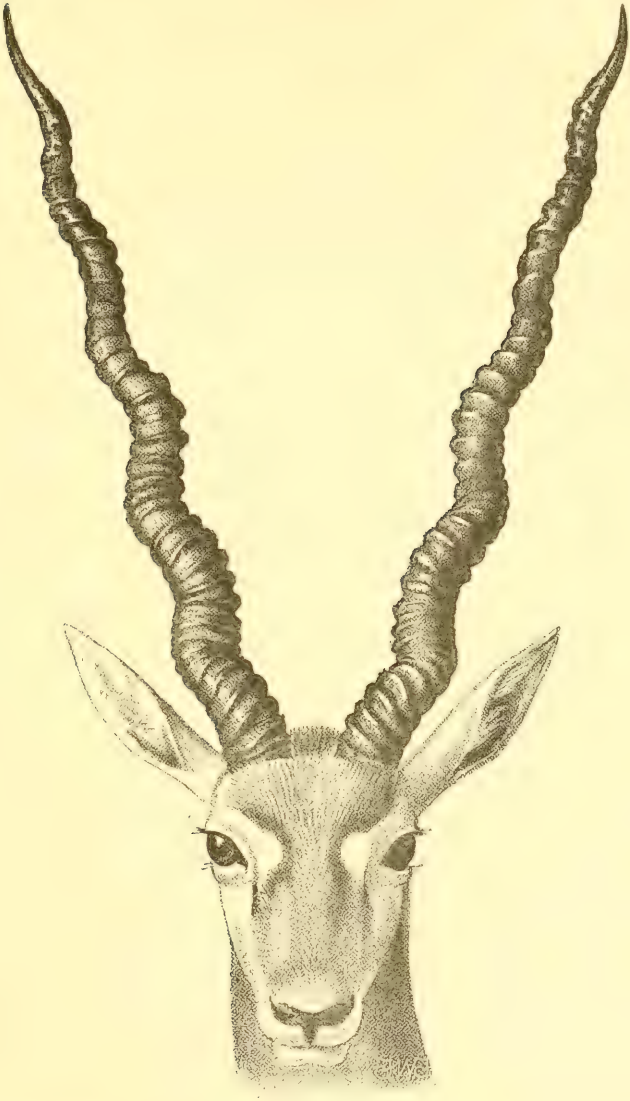
The skull is in all its proportions much smaller than that of *C. bohor*, but the palatine is, if anything, longer than in *C. bohor*.

Height about 30 inches; hoofs on the bottom line, $1\frac{1}{2}$ inch; fore-legs, 20; tail about 6; ears, $7\frac{1}{4}$; horns along the curve nearly 6.

The species is named after Mr. Astor Chanler. It was first noticed to differ from its allies by Mr. Rowland Ward, who possesses a flat skin without legs and horns, and he pointed it out to Mr. Astor Chanler, who then procured the type specimen. The locality, as given to Mr. Ward by Mr. Astor Chanler, is "Zombènè Range," about fifty miles north-east of Mount Kenya, Central East Africa, six hundred miles inland.

The type, an adult *male*, will be placed in the Smithsonian Institution, Washington.

Length on curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$5\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{7}{8}$	See above . .	W. Astor Chanler.



BLACKBUCK or INDIAN ANTELOPE (Antilope cervicapra).

AVERAGE WEIGHT, 85 lbs. HEIGHT at shoulder about 32 inches.

Distribution—India, from the base of the Himalayas to the neighbourhood of Cape Comorin, and from the Punjab to Lower Assam (W. T. Blanford).

BLACKBUCK or INDIAN ANTELOPE (Antilope cervicapra)—*continued.*

Length. Straight.	Circumference.	Tip to Tip.	Habitat.	Owner.
30¾	...	..	Mohun Pass . .	Asian, April 27, 1880.
28¼	5	17¾	...	A. O. Hume, Private Collection.
28	...	20	Jeypore . . .	P. Dunell Pank.
27⅞	...	...	Do.	Capt. B. Blood.
27	5	19½	Bikanir Desert, Punjab	Capt. Harry V. Brooke, late 92nd Highlanders.
26¾	5	17	Barra, between Ambala and Ludhiana	Do.
26¾	4¾	...	Bikanir Desert . .	Major-General Alexander A. A. Kinloch.
26⅜	5	17⅞	...	A. O. Hume, Private Collection.
26¼	5	23⅛	Oudh	E. St. J. Lawson.
26	5	21⅞	Bikanir Desert . .	H. W. Codrington, Officers' Mess, Queen's Own Corps of Guides.
25½	..	15	...	Col. Martin.
25½	4⅞	18	Punjab . . .	Capt. R. H. Rattray.
25⅜	5½	14½	...	Hume Collection, British Museum.
25¼	4¾	19	Jeypore . . .	A. B. Graves.
25⅛	5⅛	21¾	Gadaruara District, Central Provinces	Sir John H. Morris, K.C.S.I.
25	4⅞	19	India	Hume Collection, British Museum.
25	5¼	13½	Bombay . . .	Bombay Natural History Society's Museum.
24¼	5	18½	India	Marquis of Ailsa.
24¼	5	19¼	Punjab . . .	Capt. H. Hicks-Beach.
24¼	4·33	20·85	...	Baron Edmund de Poncins.
24	...	...	Serai	Otho Shaw.
24	...	20	...	Duke of Bedford.
24	4⅝	16¾	Rajpura . . .	J. E. Ubsdell.
24	5	18⅞	Aligur . . .	St. George Littledale.
23¾	5⅜	21	India	H.R.H. Duke of Saxe-Coburg and Gotha.
23¾	...	...	Central Provinces .	Lieut. H. M. Biddulph.
23⅝	5⅛	14¾	...	Hon. Walter Rothschild.

BLACKBUCK or INDIAN ANTELOPE (Antilope cervicapra) —*continued.*

Length. Straight.	Circumference.	Tip to Tip.	Habitat.	Owner.
23⅝	4¾	16⅜	Central Provinces .	C. D. Twopeny.
23⅝	5⅛	20⅞	India	H.R.H. Duke of Saxe-Coburg and Gotha.
23½	5⅛	16¾	Bikanir Desert . .	Capt. F. E. Shafto-Adair.
23½	5	24½	Do. . . .	U. O. Thynne.
23½	5½	18	Ghazabad . . .	Capt. Geo. Douglas.
23¼	5½	18½	...	Hume Collection, British Museum.
23¼	4¾	17¾	Sirhind . . .	R. J. Heber-Percy.
23	5⅛	13⅜	North India . .	Sir Victor Brooke's Collection.
22¾	5	15⅞	...	Martyn Kennard.
22⅝ *	5¾	...	...	Hon. Walter Rothschild.
22½	5	18	North India . .	Sir Edmund G. Loder, Bart.
–22⅜	4⅞	15⅛	Delhi	A. E. Leatham.
22¼	4¾	13	...	Capt. Henry Streatfeild.
22¼	4¾	17¾	...	Lieut.-Col. H. Wade-Dalton.
22	5	14¾	...	W. E. Rowley.
22	4⅜	18⅛	...	Sir. Robt. Harvey, Bart.
21¾	4½	18⅝	Central Provinces .	Major C. S. Cumberland.
21	5⅛	16	N.W. Provinces .	Col. J. Biddulph.
-21	5	19	...	Dublin Museum.
20¼	5	15½	Near Bhopal . .	F. W. H. Walshe.

* Albino.

Drawn from an Uganda specimen.

IMPALA ANTELOPE (**Æpyceros melampus**).
Do. (**Æpyceros petersi**).
Do. (**Æpyceros johnstoni**).

Few antelopes in South Africa excel the elegant Pallah, or Impala, in grace and beauty. For its size—it is not a large or heavily built antelope like the waterbucks—its horns are considerable, and they are, moreover, remarkable for a shape and structure not to be found in any other species. In the good days, not so very long since, Impala were to be found abundantly amid the bush and woodland along every stream in the Transvaal and Bechuanaland. Now their range is much reduced. They are still to be found here and there, however, in the bushy country of the Northern Transvaal, and in Khama's Country—

some few troops ranging within a day's ride of Pelachwe, Khama's capital. Farther afield, towards the Upper Zambesi and Eastern Mashonaland, in East and Central Africa, and other localities, they may be found in those big troops in which they naturally love to wander.

HEIGHT at shoulder about 33 inches.

Distribution—The tributaries of the Limpopo northwards along the banks of every river and stream wherever there is a suitable locality. Plentiful along the Chobe (F. C. Selous). Nyassaland, a dwarf variety recently described (*Æpyceros johnstoni*). East Africa as far north as Turkwell. Mr. E. Gedge says it "ranges in herds, and is chiefly encountered in or near bush. Plentiful in the north of Baringo and in the Sūk country, though it is seldom seen eastwards of the Nzoia River in Upper Kavirondo. Common about Teita and Kikumbulin."

Æpyceros petersi, from Angola and Stasholand, West Africa.

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight.	On front curve.				
23	28	$5\frac{3}{4}$	$22\frac{3}{4}$	East Cent. Africa	A. H. Neumann.
$22\frac{3}{4}$	$26\frac{1}{4}$	$5\frac{3}{4}$	15	Uganda . .	Capt. F. D. Lugard.
$22\frac{1}{2}$	27	...	$15\frac{1}{8}$	...	F. J. Jackson.
$21\frac{1}{2}$	...	6	16	East Africa . .	Rowland Ward.
$-21\frac{1}{2}$	27	6	9	Do. . .	E. Gedge.
$21\frac{1}{8}$	25	$5\frac{7}{8}$	$17\frac{5}{8}$	Do. . .	F. J. Jackson.
21	$26\frac{3}{8}$	$5\frac{5}{8}$	16	South Africa .	Hon. Walter Rothschild.
21	$27\frac{1}{2}$	$5\frac{7}{8}$	$14\frac{1}{4}$	Do. .	W. Burchell, British Museum.
$-20\frac{3}{4}$	$26\frac{1}{2}$	...	...	...	Grahamstown Museum.
$-20\frac{1}{2}$	24	$5\frac{1}{2}$	$13\frac{1}{2}$	South Africa .	Dublin Museum.
$20\frac{1}{2}$	...	$5\frac{3}{4}$	15	East Africa . .	W. Astor Chanler.
$20\frac{1}{2}$	...	$5\frac{5}{8}$	$11\frac{1}{2}$	Do. . .	H. C. V. Hunter.
$20\frac{1}{2}$	$25\frac{1}{4}$	5	$12\frac{5}{8}$	Do. . .	F. J. Jackson.
$20\frac{3}{8}$	$23\frac{3}{8}$	6	$14\frac{1}{2}$	Do. . ..	Sir Robert Harvey, Bart.

IMPALA ANTELOPE (Æpyceros melampus)—*continued.*

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight.	On front curve.				
20	..	...	...	Chobe River .	F. C. Selous.
20	...	...	...	East Africa . .	Sir J. Willoughby, Bart.
20	...	6	14	Matamara Bush .	F. V. Kirby.
20	23½	5½	16	Brit. East Africa .	J. Gardiner-Muir.
20	24	5½	16	Do. .	Do.
20	25½	6	13¾	Do. .	H. Charrington.
19¾	24⅞	5⅞	11⅝	Africa . . .	Sir Edmund G. Loder, Bart.
–19¾	26¼	5¾	22¼	East Africa . .	C. W. Hobley.
19¼	23⅝	5⅜	16⅜	Do. . .	Capt. R. A. J. Montgomerie, C.B., R.N.
19⅛	24½	5⅝	12⅜	South Africa .	British Museum.
–19	23½	...	12⅝	Lydenburg . .	F. H. Barber.
19	23½	5	8	East Africa . .	C. S. Vandeleur.
19	...	6	21	South Africa .	Rowland Ward.
18¾ *	23¼	6	12¼	Kaokoland, West Africa	Capt. F. Cookson.
18¾	22¾	6	14¾	East Africa . .	Major W. H. Williams.
...	23⅝	5½	9⅜	Do. . .	Hon. Walter Rothschild.
18½	23	5⅞	8⅞	South Africa .	C. D. Rudd.
17¼	22	5¼	8½	Do. . .	Frank Harris.
17¼	21½	5½	12¾	...	E. Lort-Phillips.
17	21¼	5	8¼	South Africa .	Viscount Ennismore.
17	21	5¼	6½	Pungwe District .	Marquis of Hamilton.
16⅜	19⅜	5⅜	10¼	South Africa .	Sir Victor Brooke's Collection.
–16⅛	2¼	5½	8½	N.E. Transvaal .	A. M. Naylor.

* *Æpyceros petersi.*

SAIGA (Saiga tartarica).

HEIGHT at shoulder about 30 inches.

Distribution—Eastern Europe and Western Asia.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$14\frac{3}{8}$	$5\frac{1}{4}$	$3\frac{1}{2}$	Russia . . .	Hon. Walter Rothschild.
$13\frac{3}{4}$	5	...	...	Sir Edmund G. Loder, Bart.
$13\frac{3}{4}$	$4\frac{3}{8}$	$3\frac{1}{2}$	...	Sir Victor Brooke's Collection.
$13\frac{5}{8}$	5	$5\frac{1}{2}$	Sarepta, South Russia	British Museum.
$13\frac{1}{8}$	$5\frac{3}{8}$	$4\frac{3}{8}$	Russia . . .	Hon. Walter Rothschild.
$12\frac{7}{8}$	$5\frac{3}{8}$	(single horn)	Do. . . .	British Museum.
$12\frac{7}{8}$	$4\frac{5}{8}$	$5\frac{5}{8}$	Sarepta, South Russia	Do.
$-12\frac{1}{2}$	5	$4\frac{1}{4}$	Siberia . .	Dublin Museum.
$11\frac{1}{2}$	$4\frac{3}{4}$	$4\frac{5}{8}$	Russia . . .	Rowland Ward.
11	$4\frac{7}{8}$	$4\frac{1}{2}$	Siberia . .	British Museum.

TIBET ANTELOPE (Pantholops hodgsoni).

Known in Ladak as Chiru and Choos.

An adult male measures about 32 inches at shoulder (W. T. Blanford).
" " 36 inches (Major A. E. Ward).
" " 32½ inches (Lieut. H. M. Biddulph).

WEIGHT, ♂ shot by P. H. G. Powell-Cotton, 70 lbs. (without head skin).
" 90 lbs. (Major A. E. Ward).
" 108 lbs. (Lieut. H. M. Biddulph).

Distribution—Western Tibet and Turkestan.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
27⅞	5⅞	13½	...	A. O. Hume, Private Collection.
27⅝	5½	11¼	...	Sir Robert Harvey, Bart.
27⅛	5½	15⅛	...	A. O. Hume, Private Collection.
–26½	...	...	Chung Chemmo .	Major A. E. Ward.
26⅜	5⅞	13⅝	Ladak . . .	Hon. Charles Ellis.
26	4⅞	12⅞	Tibet . . .	Capt. G. Campbell.
25⅜	5⅝	12½	...	Hume Collection, British Museum.

TIBET ANTELOPE (Pantholops hodgsoni)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
25¼	5¾	12¾	..	Hume Collection, British Museum.
-24⅞	5⅜	13¼	Tibet . . .	P. H. G. Powell-Cotton.
24¾	5⅝	11½	...	Sir Edmund G. Loder, Bart.
24⅝	5⅜	11¾	...	Sir Robert Harvey, Bart.
-24½	4¾	...	Ladak . . .	Major-General Alexander A. A. Kinloch.
24⅜	5¼	16½	..	British Museum.
-24	...	...	Chung Chemmo .	Capt. H. Trevor.
-24	...	...	...	Do.
24	...	...	Chunchingris .	Otho Shaw.
24	5⅜	14⅜	Nepal . . .	B. H. Hodgson, British Museum.
-24	5½	12	...	T. E. Buckley.
23⅝	5¼	11⅜	Tibet . . .	H. C. V. Hunter.
-23⅝	5⅛	13⅞	Do. . . .	Paris Museum.
23½	5	14¾	Do. . . .	Reginald Beech.
23½	5¼	12⅞	Chung Chemmo .	Capt. H. Trevor.
23⅜	5¼	11⅜	Ladak . . .	Major C. S. Cumberland.
23¼	5⅜	14⅝	Do. . . .	Hon. Walter Rothschild.
23¼	5¼	14⅛	Do. . . .	Rowland Ward's Collection.
-23¼	5⅛	13¾	Do. . . .	Lieut. H. M. Biddulph.
23¼	...	11¼	Tibet . . .	R. J. Heber-Percy.
23⅛	5⅛	9½	...	Sir Victor Brooke's Collection.
22⅞	5⅜	13½	Ladak (15,000 ft.)	R. Lydekker, British Museum.
22¾	5½	9	Tibet . . .	T. W. Greenfield.
-22	5	10½	Do. . . .	Dublin Museum.
21	4½	10¾	...	David Hanbury.

GRANT'S GAZELLE (Gazella granti).

Swahili name—"Sala" or "Swara."

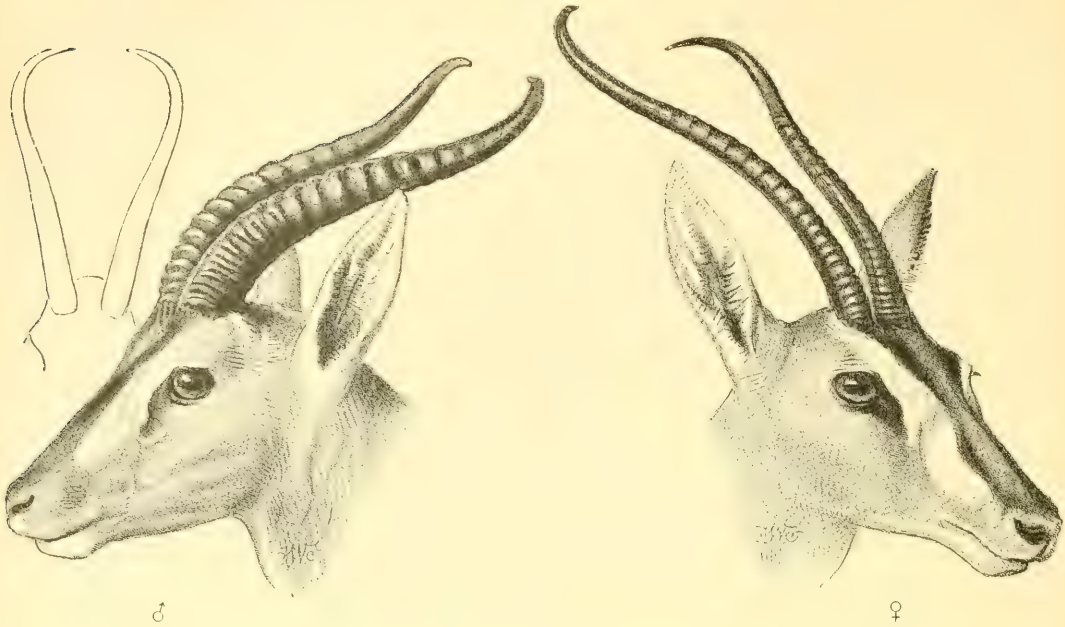
WEIGHT, clean, ♂ 115 lbs.; ♀ 65 lbs. (Capt. Lugard). Capt. R. A. J. Montgomerie, C.B., R.N., weighed several males varying from 180 to 190 lbs.

Distribution—Throughout the Masai country and round Kilima'njaro, north of Baringo; round base of Mount Elgon and the Sūk country; commonly met with; prefers the open grass lands.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
30	...	10	Kilima'niaro .	Sir John Willoughby, Bart.
28¼	6⅝	15⅛	East Africa . .	F. J. Jackson.
27⅞	6⅝	18⅜	Do. . .	H. C. V. Hunter.
27¼	6½	18⅞	Do. . .	Sir Robert Harvey, Bart.
27	...	16	Do. . .	Sir John Willoughby, Bart.
26¼	6⅜	16¾	Do. . .	Sir Victor Brooke's Collection.
25¾	6	17	Do. . .	J. Gardiner-Muir.

GRANT'S GAZELLE (Gazella granti)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
25½	7	14½	East Africa . .	Rowland Ward.
25⅛	6½	15⅜	Do. . .	Capt. R. A. J. Montgomerie, C.B., R.N.
25	6½	14	Kilima'njaro .	T. W. Greenfield.
24	7¼	8¼	East Africa . .	H. Charrington.
23¼	6½	13	Do. . .	Major W. H. Williams.
23	6½	13⅜	Masailand . .	Capt. F. D. Lugard.
23	7¼	9	East Africa . .	E. Gedge.
22¾	6⅜	12⅛	Do. . .	Hon. W. Rothschild.
–22½	6¾	13	Kilima'njaro .	Paris Museum.
22⅛	6⅜	5⅞	Mount Land .	F. J. Jackson, British Museum.
22	6½	14½	East Africa . .	W. Astor Chanler.
21¾	6½	15	Do. . .	R. P. Carroll.
21½	6¾	8	Central Africa .	A. H. Neumann.
20¾	6⅜	9⅞	Do. . .	J. Carr Saunders.
19⅝	6½	7⅛	River Juba, Somaliland	Sir John Kirk, M.D., K.C.B.
♀ 17½	3¾	9	East Africa . .	H. C. V. Hunter.
♀ 17	...	6	Lake Jipé . .	Sir John Willoughby, Bart.
♀ 15	4	6¾	East Africa . .	E. Gedge.
♀ 12⅜	3½	7¾	South Somaliland	Sir John Kirk, M.D., K.C.B., British Museum.
♀ 12¼	3⅜	5⅝	River Juba, Somaliland	Sir John Kirk, M.D., K.C.B.
♀ 12⅛	...	...	...	Capt. R. A. J. Montgomerie, C.B., R.N.



SŒMMERRING'S GAZELLE (Gazella sœmmerringi).

Somali name—"Aoul."

HEIGHT about 30 inches.

Distribution — Abyssinian coast of the Red Sea, Berber, and East Senaar, Danakil and Somaliland (all over the Haud and Ogaden).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–20¼	...	...	Somaliland . .	Norman B. Smith.
20	5¾	4	Do. . .	Surgeon-Major J. W. H. Flanagan.
–19¾	5⅛	5⅜	The Haud . .	P. H. G. Powell-Cotton.
19½	5½	5⅝	Somaliland . .	T. W. H. Clarke.
19½	5 9/10	2	Do. . .	Sir Edmund G. Loder, Bart.
19¼	6	2	Do. . .	Do.
19¼	5½	...	Do. . .	Surgeon-Capt. J. S. Edye.

SŒMMERRING'S GAZELLE (Gazella sœmmerringi)—*continued.*

Length on front curve.	Circumference.	Tip to tip.	Habitat.	Owner.
19	5½	6	Somaliland . .	Rowland Ward.
19	5	4	Do. . .	Col. A. Paget.
18¾	5½	6	Do. . .	F. H. Barber.
18⅝	5⅛	5½	Do. . .	Capt. G. R. Cuninghame.
18½	5½	7	Do. . .	Prince Nicolas Ghika.
18½	5½	7⅝	Do. . .	Capt. G. Campbell.
18½	5½	4½	(Delayeh) Do. .	A. H. Straker.
18⅜	5⅛	5	Do. . .	Sir Henry Tichborne, Bart.
18¼	5¼	6	Somaliland . .	T. W. H. Clarke.
18⅛	5⅜	4½	Do. . .	W. D. James.
18	5½	4¾	Do. . .	J. Kenneth Foster.
18	5	7⅜	Do. . .	Major H. C. Morland.
18	5½	4	(Delayeh) Do. .	T. W. Greenfield.
17¾	5⅝	4	Somaliland . .	Major C. C. Ellis.
–17¾	5½	1⅝	Do. . .	Count Felice Scheibler.
–17¾	6	6	Do. . .	C. V. A. Peel.
17⅝	5	4⅞	Do. . .	Prince Boris Czetwertynski.
–17⅝	5	3¾	Do. . .	A. E. Leatham.
17½	5¼	7¾	Do. . .	Digby-Davies.
17½	5½	5¾	Do. . .	J. Byng-Paget.
17½	5	5¼	Do. . .	W. W. Ashley.
17⅜	6	4	Do. .	Lord Wolverton.
–17¼	5	4⅝	Do. . .	Capt. G. Douglas.
17	5¼	3¼	Do. . .	Hon. Walter Rothschild.
16⅞	5⅜	6⅛	Abyssinia . .	British Museum.
16¾	5¼	7	Somaliland . .	Capt. H. G. C. Swayne.
♀ 16¾	3½	6¼	Do. . .	H.R.H. le Duc d'Orleans.
16⅝	5	1¾	Do. . .	E. Lort-Phillips.

SŒMMERRING'S GAZELLE (Gazella sœmmerringi)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
16¼	5¼	11½	Somaliland . .	E. N. Buxton.
16	5	6	Do. . .	C. N. Welsh.
♀ 16	3⅛	6	Do. . .	Capt. H. G. C. Swayne.
–15½	5½	4	Do. . .	J. D. Inverarity.
15½	5⅜	5	Soudan . .	Col. Ralph Vivian.
15⅜	5⅛	3⅜	Somaliland . .	Lord Delamere.
♀ 15⅜	3⅜	5⅜	Do. . .	W. D. James.
–♀ 15¼	...	...	...	Capt. G. Douglas.
14¾	5½	4¼	Plains north and south of Suakin	B. Cotton.
14½	5⅛	5½	...	Capt. W. H. Besant.
–14⅜	5⅞	6	The Haud . .	P. H. G. Powell-Cotton.
♀ 14¼	2¾	10¼	Somaliland . .	Major C. H. Villiers.
14⅛	5⅜	1¼	Bogos Country, Abyssinia	British Museum.
14	5⅛	5¾	Soudan . .	Lieut.-Col. the Hon. W. Coke.
14	5½	5½	Do. . .	Col. A. Paget.
13¾	5½	6	Do. . .	W. D. James.
13½	5½	4	North East Africa	Sir Victor Brooke's Collection
13½	5⅜	5⅝	Suakin . .	Hon. Walter Rothschild.
12¾	5	5	Abyssinia . .	Sir Edmund G. Loder, Bart.
♀ 12⅝	3½	8¼	Soudan . .	Col. Ralph Vivian.
♀ 12	3¼	5⅛	Abyssinia . .	Sir Victor Brooke's Collection.
♀ 8½	3¾	5½	Soudan . .	Hon. Walter Rothschild.

♀ *

SOMALI PLATEAU GAZELLE (Gazella spekei).

Somali name—" Dhero."

HEIGHT at shoulder, 25 inches; GIRTH close to shoulder, 24 inches. WEIGHT, 38 lbs. clean. LENGTH from root of tail to nose, 39 inches.

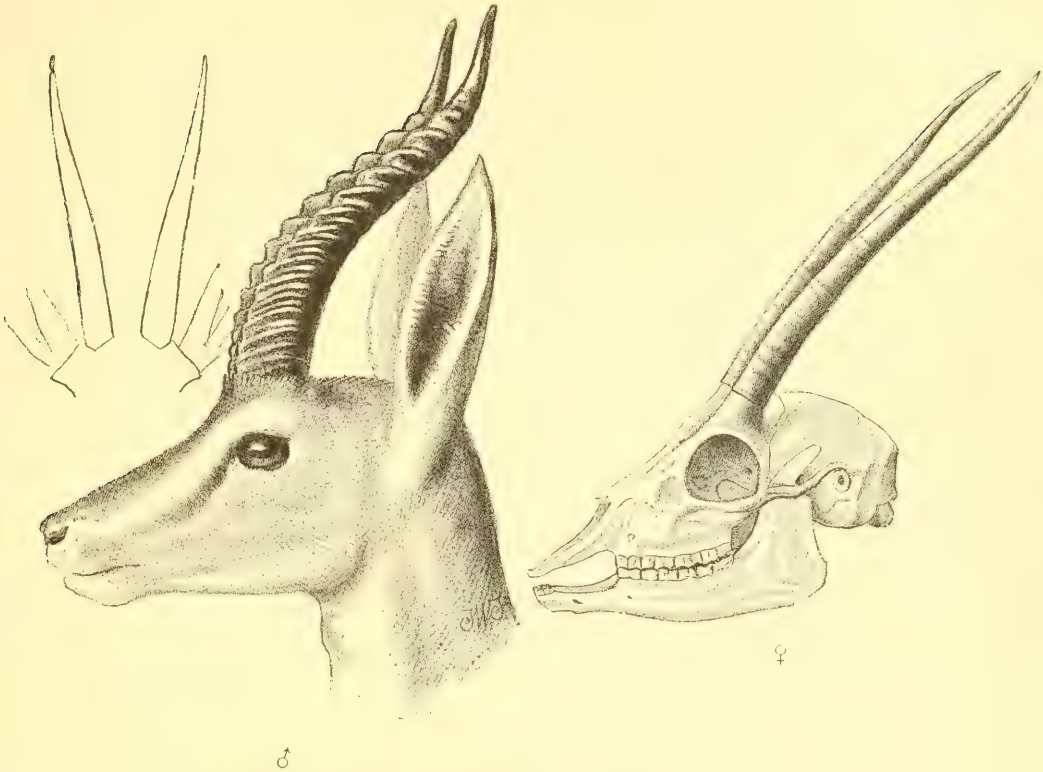
Distribution—Somaliland south of Golis, in Ogo and in the Haud, as well as in Ogo-Guban, the country near Hargeisa, where Guban rises gradually into Ogo (Capt. H. G. C. Swayne).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$11\frac{3}{4}$	$3\frac{3}{4}$	$4\frac{5}{8}$	The Haud .	Capt. H. G. C. Swayne.
$11\frac{5}{8}$	$3\frac{3}{4}$	$2\frac{1}{2}$	Do. .	Col. Arthur Paget.
$10\frac{3}{4}$	$3\frac{1}{4}$	$3\frac{3}{4}$	Somaliland .	Sir Edmund G. Loder, Bart.

* See page 165 for illustration of male.

SOMALI PLATEAU GAZELLE (Gazella spekei)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
11½	4⅜	2¾	Somaliland .	T. W. H. Clarke.
11⅛	4	5¼	Egremont .	C. Liddell.
11	4	4	The Haud .	A. H. Straker.
11	3⅞	5	Do. .	Major H. C. Morland.
11	4⅛	3⅝	Do. .	Lord Delamere.
10¾	3¾	3¾	Do. .	E. Lort-Phillips.
10¾	3⅞	3	Do. .	C. N. Welsh.
10¾	4⅛	4¼	Somaliland .	Col. A. Paget.
10⅝	3⅞	4¼	Do. .	Capt. G. F. T. Leather.
10½	3¾	4	Do. .	Capt. G. Campbell.
10½	4⅛	3½	Do. .	Count Felice Scheibler.
10⅜	3⅞	4⅛	Do. .	Sir Henry D. Tichborne, Bart.
10¼	4	4¼	Do. .	F. G. Gunnis.
–10¼	4	3⅞	Do. .	P. H. G. Powell-Cotton.
10¼	3⅞	4	Do. .	H.R.H. le Duc d'Orleans.
10⅛	3⅞	4½	Do. .	Hon. Walter Rothschild.
10⅛	3⅝	3½	Do. .	W. D. James.
9⅞	3¾	4⅛	Do. .	Capt. G. R. Cuninghame.
–9¼	4	3⅝	Do. .	A. E. Leatham.
–10	4	...	Do. .	J. D. Inverarity.
♀ 9½	2⅞	3¼	Do. .	T. W. H. Clarke.
♀ 9	2½	5¼	...	Capt. G. F. T. Leather.



SOMALI LOWLAND GAZELLE (Gazella pelzelni).

This is common round Berbera, but is replaced by *Gazella spekei* when the Somali plateau is reached. It has often been mistaken for *Gazella spekei*, but can readily be distinguished from that species by its straighter horns and the absence of the loose skin on the nose.

Distribution—Somaliland in Guban to the north of Golis.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
12¼	3¾	4¼	...	Capt. H. G. C. Swayne.
12¼	4⅛	5½	Somaliland .	Lord Delamere.
12	3¾	4⅛	Do. .	Capt. G. Campbell.
11½	3½	5½	Do. .	T. W. H. Clarke.

SOMALI LOWLAND GAZELLE (Gazella pelzelni) —*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$11\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{4}$	Somaliland .	Major H. C. Morland.
$11\frac{1}{4}$	$4\frac{1}{8}$	$5\frac{1}{2}$	Do. .	A. H. Straker.
$11\frac{1}{4}$	$3\frac{7}{8}$	$4\frac{3}{8}$	Do. .	Rowland Ward.
$11\frac{1}{8}$	$3\frac{5}{8}$	$4\frac{1}{4}$	Do. .	Capt. G. F. T. Leather.
$11\frac{1}{8}$	$3\frac{3}{4}$	$3\frac{3}{4}$	Do. .	Col. A. Paget.
11	$3\frac{3}{4}$	$4\frac{1}{8}$	Do. .	A. Trevor.
11	$3\frac{3}{4}$	$3\frac{3}{8}$	Do. .	Prince Boris Czetwertynski.
$10\frac{3}{4}$	$3\frac{3}{4}$	$4\frac{1}{8}$	Do. .	Sir Edmund G. Loder, Bart.
$10\frac{5}{8}$	$3\frac{3}{4}$	$4\frac{1}{4}$	Do. .	F. G. Gunnis.
♀ $7\frac{5}{8}$	$1\frac{3}{4}$	$2\frac{3}{4}$	Do. .	T. W. H. Clarke.

ARABIAN GAZELLE (Gazella arabica).

Hair very short and smooth; central facial band rich bay above, darker below, forming a nose-spot; light facial streak very strongly marked, running from the base of the horn over the eye, stopping just below the nose-spot; dark facial streak distinct, blackish; breast and belly white; dark lateral and pygal bands grizzly brown; light lateral band grizzly fawn; upper parts of the sides and back rich grizzled bay in adult specimens, the younger animals being grayer; knee-brushes well developed, blackish; tail black; horns massive; the annulations wide apart, diverging gradually from two-thirds their length, the upper third diverging more decidedly, and leaning a little forwards; ears moderate; size about equal to that of *Gazella dorcas.*

[Sir VICTOR BROOKE, Bart., *P.Z.S.* 1873, p. 538.]

Distribution—South Arabia.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$8\frac{1}{2}$	4	2	Mosha, South Arabia	W. T. Blanford, British Museum.
$4\frac{7}{8}$	$3\frac{1}{8}$	$3\frac{5}{8}$	... ...	Sir Victor Brooke's Collection.
♀ $4\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{2}$	... ...	Capt. H. G. C. Swayne.
– ♀ $7\frac{1}{2}$	2	$4\frac{3}{4}$	South Arabia .	Dr. Percy Rendall.

DORCAS GAZELLE (Gazella dorcas).

Arab name—"Rhozal" or "Heinar."

Total LENGTH about 3 feet 6 inches. HEIGHT at shoulder, 1 foot 9 inches to 2 feet.

Distribution—Along the foot of the hills and in the plains of Syria, North Arabia, Egypt, Algeria, Morocco, and Senegal.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$13\frac{1}{8}$	$4\frac{1}{4}$	$2\frac{1}{2}$	Algeria . .	Sir Edmund G. Loder, Bart.
$-12\frac{1}{2}$	$3\frac{5}{8}$	$5\frac{1}{8}$	Do. . .	Baron Edmond de Poncins.
$12\frac{3}{8}$	$3\frac{3}{4}$	$2\frac{3}{4}$	Do. . .	Sir Edmund G. Loder, Bart.
$12\frac{3}{8}$	$3\frac{3}{8}$	...	Do. . .	British Museum.
$11\frac{7}{8}$	$3\frac{5}{8}$	$4\frac{1}{2}$	Do. . .	Sir Victor Brooke's Collection.
$11\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{7}{8}$	Do. . .	E. N. Buxton.
$-11\frac{1}{4}$	$3\frac{5}{8}$	$3\frac{1}{8}$	Do. . .	W. E. Pease.
$10\frac{3}{4}$	$3\frac{3}{4}$	$3\frac{1}{2}$	Do. . .	Rowland Ward.

DORCAS GAZELLE (Gazella dorcas)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$10\frac{1}{8}$	4	$2\frac{1}{4}$	Shores of Red Sea	British Museum.
$10\frac{1}{8}$	$3\frac{5}{8}$	$2\frac{3}{4}$	Nubia . . .	Sir Victor Brooke's Collection.
–♀ $9\frac{7}{8}$	...	...	Algeria . .	A. E. Pease.
–$9\frac{3}{4}$	4	$3\frac{3}{4}$	Do. . .	Dr. Percy Rendall.
–$8\frac{3}{4}$	4	$3\frac{1}{2}$	Abyssinia . .	Count Felice Scheibler.
–♀ 6	...	...	Algeria . .	Baron Edmond de Poncins.

ISABELLA GAZELLE (Gazella isabella).

HEIGHT barely 24 inches at shoulder.

Distribution—Kordofan, Senaar, Abyssinia.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$10\frac{1}{4}$	$3\frac{3}{4}$	$2\frac{3}{4}$	Anseba River, Abyssinia	Sir Victor Brooke's Collection.
$10\frac{1}{8}$	$3\frac{3}{4}$	4	Komayli, Abyssinia	W. T. Blanford, British Museum.
$9\frac{3}{4}$	$3\frac{3}{4}$	$2\frac{3}{8}$	Bogos Land .	Sir Victor Brooke's Collection.
♀ 7	2	3	Do. . .	Do.
♀ 7	$1\frac{7}{8}$	$2\frac{3}{8}$	Kordofan . .	British Museum.

(Gazella dama).

Distribution—Desert of Korti, Southern Nubia, and Kordofan.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–$12\frac{5}{8}$	$5\frac{1}{8}$	$5\frac{1}{2}$	Nubia . . .	Paris Museum.
$12\frac{1}{2}$	$5\frac{1}{2}$	6	...	Justice Hopley.
$11\frac{3}{4}$	6	$3\frac{3}{4}$	Wednoon, Mogador	W. Willshire, British Museum.
$10\frac{1}{2}$	$4\frac{5}{8}$	$6\frac{3}{8}$	Senegal . .	Sir Victor Brooke's Collection.

SENEGAL GAZELLE (Gazella rufifrons).

HEIGHT a little over 2 feet.

Distribution—Senegal.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
♀ $6\frac{1}{4}$	$2\frac{1}{8}$	$2\frac{3}{8}$	Senegal . .	British Museum.

ADDRA GAZELLE (Gazella ruficollis).

HEIGHT about 3 feet at shoulder.

Distribution—North Africa.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$12\frac{1}{4}$	4	$5\frac{5}{8}$	Senaar . .	British Museum.
$11\frac{7}{8}$	$5\frac{5}{8}$	$\frac{5}{8}$	Kordofan . .	Do.

YARKAND or PERSIAN GAZELLE (Gazella subgutturosa).

HEIGHT about 26 to 30 inches. WEIGHT, clean, about 56 lbs.

Distribution—High plateau of Persia, Northern Baloochistan, Afghanistan, Yarkand, and Russian Turkestan.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–15	...	...	Maralbashi . .	H. Lennard.
$14\frac{3}{4}$	$4\frac{7}{8}$	3	Chinese Turkestan	Major C. S. Cumberland.
$-14\frac{5}{8}$	$3\frac{3}{16}$	$4\frac{3}{4}$	Lob Nord . .	Prince Henry d'Orleans, Paris Museum.
14	5	$5\frac{3}{4}$	Eastern Turkestan	Col. J. Biddulph.
$13\frac{3}{4}$	$4\frac{1}{2}$	6	Saissan, West Siberia	Dr. O. Finsch, British Museum.
$13\frac{3}{4}$	$4\frac{7}{8}$	$4\frac{1}{2}$	Chinese Turkestan	E. L. Phelps.
$13\frac{1}{2}$	$4\frac{3}{4}$	$6\frac{5}{8}$	Maralbashi . .	David Hanbury.

YARKAND or PERSIAN GAZELLE (Gazella subgutturosa)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$13\frac{3}{8}$	$4\frac{3}{4}$	$5\frac{1}{2}$	...	Hume Collection, British Museum.
$-13\frac{3}{8}$	$5\frac{3}{16}$	$7\frac{1}{8}$	Altai . . .	Prince Henry d'Orleans, Paris Museum.
$-13\frac{1}{4}$	$3\frac{3}{4}$	$3\frac{1}{8}$	...	Capt. P. J. Gordon.
$12\frac{3}{4}$	$4\frac{3}{8}$	$3\frac{3}{8}$	Altai . . .	St. George Littledale.
$12\frac{1}{8}$	4	$5\frac{1}{4}$	Syria . . .	Hon. Walter Rothschild.
$11\frac{1}{2}$	$4\frac{7}{8}$	3	Chinese Turkestan	Reginald Beech.

GUTTUROSA ANTELOPE (Gazella gutturosa).

HEIGHT about 30 inches.

Distribution—Mongolia.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$13\frac{1}{8}$	$4\frac{5}{8}$	$6\frac{1}{4}$	Mongolia . .	Sir Edmund G. Loder, Bart.
$10\frac{1}{4}$	$4\frac{3}{8}$	$2\frac{3}{4}$	Russia . .	British Museum.
$9\frac{3}{4}$	$4\frac{1}{8}$	$4\frac{3}{8}$	Pekin . . .	R. Swinhoe, British Museum.
$-8\frac{11}{16}$	$3\frac{3}{4}$	$4\frac{3}{8}$	North China .	Père R. David, Paris Museum.

GOA or TIBETAN GAZELLE (Gazella picticaudata).

Female without Horns.

HEIGHT of adult male at shoulder, 24 inches.

WEIGHT, adult male, 48 lbs. (P. H. G. Powell-Cotton).
" " 37 lbs. (Major Greenaway).

Distribution—Ladak, Western Tibet, and Mongolia.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–13½	...	...	...	Major Greenaway.
13½	3⅝	5¼	...	Hume Collection, British Museum.
13¼	4	...	Ladak . .	Major-General Alexander A. A. Kinloch.
13⅛	4	3⅝	Tibet . . .	H. C. V. Hunter.
–13⅛	3⅝	6¼	S.E. of Hanle .	P. H. G. Powell-Cotton.
–13	3¾	5¾	...	Bombay Natural History Society's Museum.
13	4⅛	4½	East Ladak .	Col. J. Biddulph.
12⅞	3⅞	4¾	...	A. O. Hume, Private Collection.
12⅞	3⅞	4⅜	...	B. H. Hodgson, British Museum.
12¾	3⅞	2½	...	Hume Collection, British Museum.
12⅜	3½	5½	South of Hanle .	Col. F. Lister-Kay.

GOA or TIBETAN GAZELLE (Gazella picticaudata)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$12\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{3}{16}$	Tibet . . .	Prince Henry d'Orleans, Paris Museum.
$12\frac{1}{4}$	$3\frac{1}{2}$	$6\frac{1}{4}$	Ladak . . .	David Hanbury.
$12\frac{1}{8}$	$3\frac{1}{2}$	$6\frac{1}{2}$	Tibet . . .	Sir Edmund G. Loder, Bart.
$12\frac{1}{8}$	$3\frac{5}{8}$	5	Ladak	Capt. F. E. Shafto-Adair.
12	$3\frac{3}{4}$	5	Tibet . .	Lieut. H. M. Biddulph.
12	$3\frac{5}{8}$	$2\frac{1}{2}$	Do. . . .	H. C. V. Hunter.
12	4	$5\frac{1}{2}$	...	Rowland Ward.
$11\frac{7}{8}$	$3\frac{3}{8}$	$5\frac{7}{8}$	Tibet . . .	B. H. Hodgson, British Museum.
$11\frac{1}{2}$	$3\frac{5}{8}$	$4\frac{1}{8}$	Do. . . .	Hon. Walter Rothschild.
$11\frac{1}{4}$	$3\frac{1}{2}$	$4\frac{1}{4}$	Hanle . . .	F. W. H. Walshe.
11	$3\frac{5}{8}$	$3\frac{3}{8}$	Ladak . . .	R. Lydekker, British Museum.
8	$3\frac{3}{4}$	$3\frac{1}{8}$	...	Sir Victor Brooke's Collection.

SPRINGBUCK (Gazella euchore).

The Springbuck is happily still abundant in many parts of South Africa, although not now to be found in those innumerable myriads in which, forty or fifty years since, it overran the Karroos and plains. Thanks to some little attempt at preservation, it still retains its footing in many parts of Cape Colony and the Orange Free State. On the plains about the Botletli River and the saltpans of that region, in Great Namaqualand and Damaraland, and upon the Ovampo Flats, it is still to be found in large numbers. It is curious to find that its range extends so far to the north and west as Mossamedes, and even Benguella, in Portuguese West Africa, Mr. G. W. Penrice, an Englishman, having recently shot considerable numbers in the plains near the Atlantic littoral in those regions. There are few better forms of rifle practice than stalking the fleet and wary Springbuck upon the great plains on which it loves to feed and disport itself. The venison of this antelope, when fat and in good condition, is, upon the whole, the most delicious of all African game animals.

HEIGHT at shoulder about 28 to 30 inches. WEIGHT, clean, 50 to 60 lbs.

Distribution—Preserved in portions of Cape Colony, Orange Free State, and the Transvaal. Still to be found in their wild state in parts of Ovampoland, Great Namaqualand, Damaraland. This species does not appear to occur in the Zulu country.

SPRINGBUCK (Gazella euchore)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
19	5	20¼	...	W. F. Webb.
–17	...	...	Middleburg Flats	F. H. Barber.
–16½	...	...	Bechuanaland .	Vryburg Club.
15½	6½	7¼	...	Hon. T. Thynne.
–15½	6½	...	...	Dr. Maloney.
15½	6⅛	3½	Cape Colony .	C. D. Rudd.
15⅛	6¼	5⅞	West Africa, Ovampoland	Capt. F. Cookson.
15⅛	5¾	10⅞	...	The late W. C. Oswell.
15	5¾	2	...	J. A. Nicolls.
–14½	...	...	...	Alfred Ebden.
14¼	7	2½	South Africa .	A. W. Davis.
14¼	6¼	5	Do. . .	C. Ansell.
14	5¾	4¼	...	British Museum.
13⅞	6	5⅜	Griqualand . .	F. C. Selous.
13⅝	5¼	5⅝	Benguella . .	G. W. Penrice.
13⅝	5½	7⅛	...	Sir Victor Brooke's Collection.
13½	5½	5	Botletli River, Ngamiland	H. A. Bryden.
13½	5⅜	3¾	...	Sir Edmund G. Loder, Bart.
13⅜	5⅞	4⅜	South Africa .	F. C. Selous.
13	...	...	Middleburg Flats	F. H. Barber.
–♀ 13	...	...	South Africa .	Alfred Ebden.
12¾	5¼	3¼	Cape Colony .	Rowland Ward.
12½	5	4	Orange Free State	Julius Jeppe.
11⅞	5¾	6½	...	Hon. Walter Rothschild.
11½	6½	2⅜	Orange Free State	Capt. H. H. Livingstone.
11½	...	...	...	F. H. Barber.
11¼	5½	2¾	...	Marquis of Hamilton.
♀ 10¾	3¼	5¾	South Africa .	F. C. Selous.

SPRINGBUCK (Gazella euchore)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
♀ $10\frac{1}{8}$	$3\frac{3}{8}$	$2\frac{1}{2}$	West Africa . .	Capt. F. Cookson.
♀ $9\frac{1}{4}$	$3\frac{3}{8}$	$4\frac{3}{4}$	Benguella . .	G. W. Penrice.
♀ $8\frac{5}{8}$	$2\frac{1}{2}$	4	Natal . . .	British Museum.
♀ 8	$3\frac{1}{8}$	$2\frac{1}{2}$	South Africa .	A. Beit.
♀ $7\frac{1}{2}$	$2\frac{3}{8}$	$2\frac{7}{8}$	...	F. C. Selous.
10	$3\frac{5}{8}$	$2\frac{1}{2}$	Ngamiland . .	H. A. Bryden.

Speke's Gazelle (*Gazella spekei*).

INDIAN GAZELLE (Gazella bennetti).

Hindustani name—" Chikara."

Adult Male: HEIGHT about 26 ins. at shoulder; WEIGHT about 40 lbs.

Distribution—North-Western and Central India (extending through Baloochistan) to the eastern shore of the Persian Gulf (W. T. Blanford).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
-15	5	...	Rajputana . .	His Highness Maharaj Rana Bahadur of Jhalawar.
-14¼	...	...	Raj. Waller, near Ferozepore	Capt. Harry Brooke.
-14⅛	...	...	Sirsa Dist., Punjab	Capt. H. Trevor.
14	4⅜	5¾	Raj. Waller, near Ferozepore	Capt. Harry Brooke.
13¾	4½	7	...	Sir Victor Brooke's Collection.
13¼	4	4¼	...	Sir Edmund G. Loder, Bart.
-13¼	4¼	...	Delhi . . .	Major-General Alexander A. A. Kinloch.
13¼	4	6¼	...	Capt. A. O. Chambers.
-13⅛	4½	4	Hissar . .	Capt. P. J. Gordon.
-13	3·95	3·95	Gwalior . .	Baron Edmond de Poncins.
-13	4¼	5	...	Major Colvin Stewart.

INDIAN GAZELLE (Gazella bennetti)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
13	$3\frac{3}{4}$	6	...	Capt. R. H. Rattray.
$12\frac{3}{4}$	$4\frac{3}{8}$	$7\frac{1}{2}$	...	H. C. V. Hunter.
$12\frac{3}{4}$	$4\frac{1}{4}$	$5\frac{7}{8}$	North Punjab .	Col. J. Biddulph.
$12\frac{3}{8}$	4	$5\frac{1}{2}$	Simrol, Bengal .	Col. John Evans, British Museum.
–12	...	...	Kathiawar . .	Lieut.-Col. L. L. Fenton.
12	4	$7\frac{1}{2}$	Punjab . .	Capt. A. Hicks-Beach.
12	$4\frac{1}{2}$		Meerut, N.W. Provinces	C. Hastings-Wood.
$11\frac{5}{8}$	4	$4\frac{1}{2}$	...	Sir Robert Harvey, Bart.
$11\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{4}$	Bikanir Desert .	Capt. F. E. Shafto-Adair.
$11\frac{3}{8}$	$3\frac{5}{8}$	$4\frac{3}{8}$	...	N. C. Taylor.
$11\frac{1}{4}$	$4\frac{1}{4}$	5	Nowgong, Central Provinces	R. J. Heber-Percy.
$11\frac{1}{8}$	$4\frac{5}{8}$	$5\frac{3}{8}$	...	Hume Collection, British Museum.
11	4	$5\frac{1}{4}$	Bikanir Desert .	Capt. C. F. Pinney.
11	$3\frac{3}{4}$	6	Berar . . .	C. H. Seely.
$10\frac{7}{8}$	4	$5\frac{1}{8}$	..	Maharajah Dhuleep Singh.
$10\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$	...	Lieut.-Col. H. Wade-Dalton.
10	$3\frac{1}{2}$	3	Near Bhopal .	F. W. H. Walshe.
10	$4\frac{1}{2}$	$5\frac{1}{4}$	Damoor, near Delhi	T. Hugh Mann.
$9\frac{7}{8}$	4	5	Simrol, Bengal .	Col. John Evans, British Museum.
$9\frac{3}{4}$	$3\frac{1}{2}$	$5\frac{1}{8}$	Sind . . .	R. Lydekker, British Museum.
$9\frac{1}{2}$	$4\frac{1}{4}$	$5\frac{1}{8}$	...	Hon. Walter Rothschild.
♀ $7\frac{1}{8}$	$1\frac{5}{8}$	$2\frac{1}{4}$	...	Sir Victor Brooke's Collection.
♀ $4\frac{7}{8}$	...	$1\frac{1}{2}$	Deccan . .	Col. Sykes, British Museum.

ATLAS GAZELLE (Gazella cuvieri).

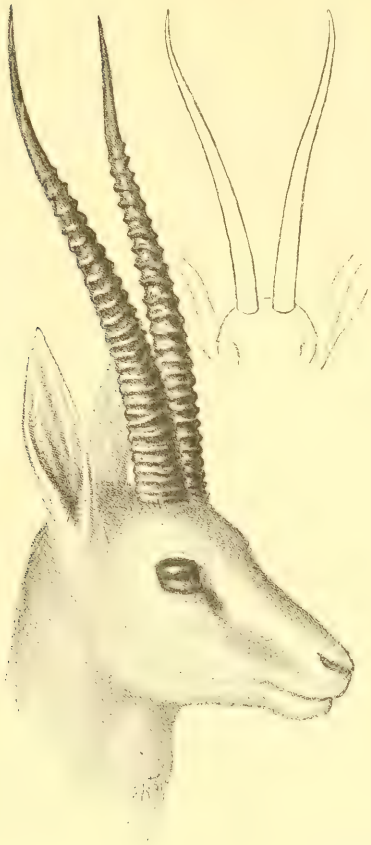
This beautiful Gazelle is rather a rare trophy. The head very closely resembles *Gazella thomsoni*, although the horns are not quite so long. Baron Edmond de Poncins watched some of these gazelles feeding, and noticed them frequently draw their ears flat along the upper part of their necks.

Arab name—" Admi " or " Edmi."

Adult Male: HEIGHT, $27\frac{1}{2}$ inches.

Distribution—High up in the hills of Algeria and Morocco.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$14\frac{7}{8}$	5	$3\frac{5}{8}$	Algeria . .	Sir Edmund G. Loder, Bart.
$-14\frac{1}{8}$	...	...	Do. . .	A. E. Pease.
♀ $13\frac{7}{8}$	$3\frac{1}{2}$	$7\frac{1}{8}$	Do. . .	E. N. Buxton.
$-13\frac{5}{8}$	$4\frac{1}{4}$	$5\frac{1}{2}$	Do. . .	Baron Edmond de Poncins.
♂ $12\frac{3}{4}$	$4\frac{3}{8}$	$3\frac{5}{8}$	Do. . .	E. N. Buxton.
$12\frac{3}{8}$	$3\frac{1}{2}$	$5\frac{1}{4}$	Do. . .	Hon. R. A. Ward.
$12\frac{3}{8}$	$3\frac{3}{4}$	$5\frac{1}{2}$	Do. . .	Rowland Ward.
♀ 11	$2\frac{1}{2}$	$5\frac{7}{8}$	Do. . .	J. J. S. Whitaker.



LODER'S GAZELLE (Gazella loderi).

Arab name—"Rhime." *French name*—"Gazelle de Sables.

Distribution—Algeria, Sahara, found in the hills quite high up in the coolest plains, 4000 or 5000 feet above sea-level. They keep on the northern slopes of the hills.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$14\frac{1}{4}$	$3\frac{1}{2}$	$10\frac{1}{4}$	Algeria . .	Sir Edmund G. Loder, Bart.
14	$3\frac{7}{8}$	3	Do. . .	Hon. R. A. Ward.
$13\frac{5}{8}$	$3\frac{5}{8}$	$5\frac{1}{2}$	Do. . .	W. E. Pease.

LODER'S GAZELLE (Gazella loderi)—*continued.*

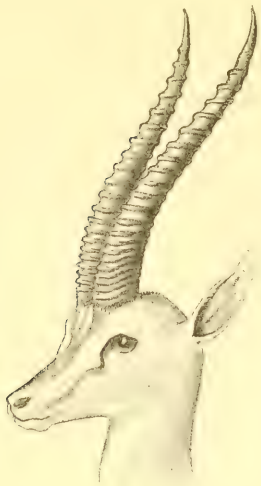
Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–13¼	3¾	3¾	...	Baron Edmond de Poncins.
13½	3¾	8¾	Sahara . .	Sir Edmund G. Loder, Bart.
–13⅜	...	...	Do. .	A. E. Pease.
13¼	3½	4¾	Do. . .	Rowland Ward.
12⅛	3⅞	4¾	Do. . .	Hon. Walter Rothschild.
♀ 10¼	2⅛	3½	South of Atlas Mountains	Lord Grantley.
♀ 9⅛	1⅞	3¼	Algeria . .	Hon. Walter Rothschild.

BLACK-TAILED GAZELLE (Gazella tilonura).

HEIGHT, 29 inches.

Distribution—Bushy plains of the Anseba, Bogosland, South Senaar.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
10¾	3¾	4½	...	E. Lort-Phillips.
10¾	4	2⅛	Bogos Country, Abyssinia	British Museum.
10¼	4⅛	3¾	Do.	Do.
10¼	4⅛	2⅞	North Africa .	Col. Ralph Vivian.
9⅞	4⅜	1⅞	Bogos Country, Abyssinia	Sir Victor Brooke's Collection.
9⅞	...	1½	Anseba River, Abyssinia	Do.
9¾	3¾	3½	North Africa .	Col. Ralph Vivian.
9½	4¼	1¾	Do. . .	Do.
8¼	3⅜	2½	...	Lieut. E. Lacy.
7¾	3⅞	1⅝	Bogos Country, Abyssinia	British Museum.
♀ 5⅛	1¾	1¾	Abyssinia . .	Sir Victor Brooke's Collection.



THOMSON'S GAZELLE (Gazella thomsoni).

This Gazelle was discovered in East Africa by the late Mr. Joseph Thomson, the celebrated explorer.

Mr. E. Gedge has kindly furnished me with the following notes :—"It is one of the commonest Gazelle in Masailand, where there are apparently two varieties, one large and one small, the difference between them being very marked. Ranges in large herds on the open ground, and is easily approached."

HEIGHT at shoulder about 22 inches.

Distribution—Masailand, East Africa.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
15½	4¾	3¾	Uganda, East Africa	F. J. Jackson.
15½	4½	8½	Do.	E. Gedge.
15¼	4¾	4⅜	Do.	F. J. Jackson, British Museum.
14½	4	3¼	Do.	Sir Edmund G. Loder, Bart.
14½	4½	2½	Do.	Count Felice Scheibler.
–14½	4¾	5¾	...	T. E. Buckley.
14½	4½	4¾	Uganda, East Africa	J. Gardiner-Muir.
14⅜	4¼	3⅛	East Africa . .	Sir Robert Harvey, Bart.

THOMSON'S GAZELLE (Gazella thomsoni)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$4\frac{1}{4}$	$4\frac{1}{4}$	$5\frac{7}{8}$	Masailand . .	H. C. V. Hunter, British Museum.
14	$4\frac{1}{2}$	$4\frac{3}{4}$	East Africa . .	H. Charrington.
$13\frac{3}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	Do. . .	Capt. F. D. Lugard.
$13\frac{1}{2}$	$4\frac{3}{8}$	$4\frac{3}{8}$	Do. . .	Rowland Ward.
$13\frac{3}{8}$	$4\frac{5}{8}$	$4\frac{1}{4}$	Do. . .	Sir Robert Harvey, Bart.
$13\frac{3}{8}$	$4\frac{1}{2}$	$5\frac{3}{8}$	Do. . .	Hon. Walter Rothschild.
$13\frac{1}{8}$	$4\frac{3}{4}$	$5\frac{1}{2}$	Do. . .	Capt. J. W. Pringle, R.E.
13	$4\frac{1}{2}$	4	Do. . .	W. Astor Chanler.
13	$4\frac{1}{2}$	6	Do. . .	J. Gardiner-Muir.
12	$4\frac{1}{4}$	$5\frac{1}{4}$	...	Capt. R. A. J. Montgomerie. C.B., R.N.
♀ $5\frac{1}{2}$	$1\frac{5}{8}$	$3\frac{1}{2}$	L. Naivasha .	F. J. Jackson.

Skull and Horns of Clarke's Gazelle (*Ammodorcas clarkei*).
Shot by T. W. H. Clarke, Somaliland.

CLARKE'S GAZELLE (Ammodorcas clarkei).

Type—British Museum.

When the first specimen was sent me by Mr. T. W. H. Clarke, he wrote as follows:—"The Somali name for these antelopes is 'Debo Tag.' I shot them in the new country I went into, and did not see them in any other part. They have a very thin long tail, and when running throw it up and over towards the neck. The neck is very long and thrown back towards the tail, so that the two look as if they would touch each other."

WEIGHT of adult males (less loss of blood), 65, 66, and 70 lbs., weighed by Mr. T. W. H. Clarke. Females (less loss of blood), weighed by Mr. T. W. H. Clarke, 56 and 62 lbs. (large and fat). HEIGHT at shoulder, ♂ 33 inches; from nose to tip of tail, 5 feet 5 inches. GIRTH close to shoulder, 26¼ inches; GIRTH round belly, 30¼ inches.

Distribution—Central Somaliland (eastern parts of the Haud).

CLARKE'S GAZELLE (Ammodorcas clarkei)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–13	...	...	Somaliland . .	J. D. Inverarity.
$12\frac{5}{8}$	$5\frac{1}{4}$	$4\frac{5}{8}$	Do. . .	Hon. Walter Rothschild.
$11\frac{3}{4}$	$4\frac{7}{8}$	$3\frac{5}{8}$	Do. . .	Col. A. Paget.
$11\frac{3}{4}$	$4\frac{3}{4}$	$3\frac{5}{8}$	Do. . .	T. W. H. Clarke.
$11\frac{1}{4}$	$4\frac{1}{4}$	6	Do. . .	R. Hawker.
$10\frac{3}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$	Do. . .	Justice Hopley.
–$10\frac{1}{8}$	$4\frac{1}{8}$	$4\frac{1}{4}$	West of Hargeisa	P. H. G. Powell-Cotton.
$10\frac{1}{8}$	$4\frac{1}{4}$	$4\frac{7}{8}$	Somaliland . .	Rowland Ward.
–10	$4\frac{1}{2}$	$4\frac{1}{2}$	Do. . .	C. V. A. Peel.
$9\frac{3}{4}$	$4\frac{1}{2}$	$5\frac{1}{8}$	Do. . .	T. W. H. Clarke, British Museum.
$9\frac{3}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	Do. . .	Capt. H. G. C. Swayne.
9	$3\frac{1}{2}$	$3\frac{3}{8}$	Do. . .	A. Trevor.
$8\frac{5}{8}$	4	$4\frac{3}{4}$	Do. . .	T. W. Greenfield.
8	4	$3\frac{5}{8}$	Do. . .	H.R.H. le Duc d'Orleans.
$6\frac{1}{8}$	$3\frac{1}{2}$	$2\frac{1}{8}$	Do. . .	E. Lort-Phillips.

WALLER'S GAZELLE (Lithocranius walleri).

Somali name—" Gerenook."

This Gazelle was described by the late Sir Victor Brooke from a specimen collected in British East Africa.

The Horns of the specimens from Somaliland are, as a rule, very much longer than those which I have measured from British East Africa, as will be seen by reference to the list on next page.

Measurements and weights taken by Mr. T. W. H. Clarke :—

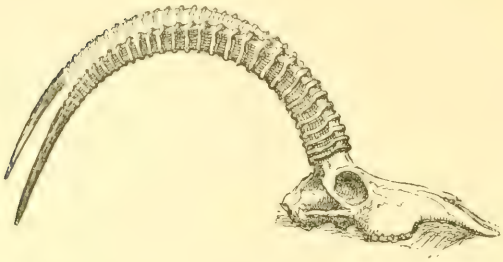
HEIGHT at shoulder, fine male, 41 inches. WEIGHT, 115 lbs.
WEIGHT of female, out of condition, 76 lbs.
Another male was 39 inches at shoulder.
GIRTH close to shoulder, 33 inches.
" " belly, 35 inches.

Distribution—Somaliland to territory parallel with Zanzibar, East Africa.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
17	$5\frac{1}{4}$	$3\frac{3}{4}$	Somaliland . .	H.R.H. le Duc d'Orleans.
$16\frac{3}{4}$	...	...	Do. .	Major H. G. Mainwaring.
–$16\frac{1}{2}$	$5\frac{3}{4}$	$3\frac{5}{8}$	Do. . .	E. L. Cappel.
$16\frac{1}{2}$	$5\frac{1}{2}$	$1\frac{5}{8}$	Do. . .	Justice Hopley.
–$16\frac{1}{4}$	$5\frac{1}{2}$	$2\frac{7}{8}$	Do. .	J. Rose (98th Regiment).
$15\frac{3}{4}$	6	$4\frac{3}{4}$	Do. .	Rowland Ward.
–$15\frac{1}{2}$	$5\frac{7}{8}$	$4\frac{7}{8}$	Do. . .	F. H. Barber.
$15\frac{1}{2}$	$5\frac{1}{2}$	3	Do. . .	J. Kenneth Foster.
$15\frac{3}{8}$	$5\frac{5}{8}$	4	Do. . .	Capt. H. G. C. Swayne.
$15\frac{3}{8}$	$5\frac{3}{8}$	$4\frac{1}{8}$	Hamal . .	C. Liddell.
$15\frac{3}{8}$	$5\frac{3}{8}$	$4\frac{3}{4}$	Somaliland . .	Lord Wolverton.
15	5	$4\frac{3}{4}$	Do. . .	Capt. J. M'Call Maxwell.
–15	6	...	Do. .	Surgeon-Major J. W. H. Flanagan.
15	$5\frac{3}{8}$	$6\frac{3}{8}$	Do. . .	F. G. Gunnis.
–$14\frac{15}{16}$	$5\frac{1}{2}$	$7\frac{1}{4}$		H.R.H. le Duc d'Orleans, Paris Museum.
$14\frac{3}{4}$	$5\frac{1}{8}$	$4\frac{3}{4}$	Somaliland .	Lord Delamere.
–$14\frac{1}{2}$	$5\frac{1}{4}$	$7\frac{1}{8}$	...	Count Felice Scheibler.
–14	$5\frac{1}{2}$	$3\frac{3}{4}$	Somaliland .	J. D. Inverarity.
14	...	3	East Africa . .	Sir John Willoughby, Bart.
–14	$5\frac{1}{4}$	4	Haud . .	P. H. G. Powell-Cotton.
14	5	$3\frac{1}{8}$	Do. . . .	Col. A. Paget.
$13\frac{7}{8}$	$4\frac{5}{8}$	$5\frac{1}{8}$	East Africa . .	H. C. V. Hunter.
$13\frac{7}{8}$	$4\frac{7}{8}$	$2\frac{7}{8}$	Somaliland . .	F. L. James.

WALLER'S GAZELLE (**Lithocranius walleri**)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
13¾	4⅞	4⅛	Somaliland . .	E. Lort-Phillips.
13¾	5⅝	2⅞	North Somaliland	J. Menges, British Museum.
13¾	5⅜	3⅞	Somaliland . .	Hon. Walter Rothschild.
–13¾	5¼	7½	Do. . .	C. V. A. Peel.
13¾	5½	3	...	Capt. G. F. T. Leather.
13¾	5¼	5	...	Digby Davies.
–13⅝	5¾	5⅝	...	T. E. Buckley.
13⅝	5⅝	3¼	Somaliland . .	A. H. Straker.
13⅝	5⅛	4⅞	Do. . .	T. W. H. Clarke.
13⅝	4⅞	4⅝	Do. . .	Capt. C. H. Villiers.
–13½	5½	5½	Assa Range . .	P. H. G. Powell-Cotton.
13⅜	4⅞	6¼	Somaliland . .	Capt. G. Campbell.
13⅜	5⅝	3½	Do. . .	Hon. Walter Rothschild.
–13⅜	5½	3¾	Do. . .	Dr. Percy Rendall.
–13¼	6½	...	Do. . .	Capt. G. Douglas.
13¼	4⅝	2⅝	Juba Valley, Somaliland	Sir John Kirk, M.D., K.C.B.
13	5	6½	Somaliland . .	Capt. W. L. H. Paget.
13	5¼	4¼	...	E. N. Buxton.
–13	5¼	5	Somaliland . .	J. D. Inverarity.
12⅞	4¾	2½	Do. . .	Prince Boris Czetwertynski.
12½	5⅜	4¾	Kilima'njaro, East Africa	F. J. Jackson.
12⅜	5⅜	4¼	Zanzibar . .	Sir Edmund G. Loder, Bart.
12⅜	4⅝	3¼	Juba Valley, Somaliland	Sir John Kirk, M.D., K.C.B.
11⅝	4¾	4⅜	East Africa . .	Sir Robert Harvey, Bart.
11¼	5¼	4¾	Somaliland . .	Sir Victor Brooke's Collection.
10¾	5	3¾	Do. . .	F. L. James.



SABLE ANTELOPE (Hippotragus niger).

It is a moot point among hunters whether the sable or roan antelope, the eland, kudu, gemsbok, or waterbuck is the worthiest reward of the hunter's skill. On the whole, perhaps, although each is entitled to warm admiration, it may be conceded that the Sable Antelope is, for its beauty, magnificence of horn, splendour of coat, and supremely noble port, not to be excelled by any antelope that walks the earth. Every man who has shot a good Sable Antelope bull, from Cornwallis Harris—who, sixty years since, discovered, shot, and named the first specimen—downwards, must well remember the glow of pride and satisfaction with which he contemplated the magnificent form stretched at his feet. It is a pleasure to know that the Sable is still abundant in parts of Eastern Mashonaland, and thence towards the coast. A wounded Sable Antelope is a somewhat dangerous animal, and should be approached with caution.

HEIGHT at shoulder, 4 feet 6 inches.

Distribution.—South-Western Matabeleland, in the neighbourhood of the Ramokwebani, Shashani, and Samookwe rivers (tributaries of the Shashi). Scarce along the waggon-road from Tati to Zambesi; sparingly along the Chobe River. In the broken country to the south of the Victoria Falls; Manica plateau, north of the Zambesi, its true home; Mashonaland and Matabeleland (F. C. Selous); Nyassaland (Crawshay); and Central East Africa (Maji Chumbi, Gulu Gulu, and banks of the river Wami).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
-46	...	...	Eastern Border, Transvaal	W. Russell Bowker.
45¼	9½	12¼	S.E. Mashonaland	J. G. Millais.

SABLE ANTELOPE (Hippotragus niger)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–45⅛	10	14¾	Limbobo Veldt .	F. V. Kirby.
–45	10½	...	South Africa .	Earl of Dartmouth.
45	...	...	Angwa River, Lo Magundi District	J. O. Spreckley.
–44½	...	...	...	H. and A. Glynn.
44⅛	9½	8¼	Eastern Mashonaland	F. C. Selous.
–44	...	...	Lydenburg . .	F. H. Barber.
–44	10	32½	...	Berlin Museum.
43½	9¾	15	South Africa .	The late J. S. Jameson.
43	9¾	6½	Mashonaland .	F. C. Selous, British Museum.
43	10¼	13	Do. .	Major Goold-Adams.
43½	9½	9½	...	Sir Edmund G. Loder, Bart.
43	10⅜	16⅛	Chobe River .	F. C. Selous.
42¾	9⅜	12½	Mashonaland .	J. A. Jameson.
42⅝	9⅞	9½	South Africa .	Bethnal Green Museum.
42½	9¾	6	Mashonaland .	G. H. Banks.
–42	10	3½	South Africa .	Dublin Museum.
41¾	9⅝	12	Do. .	A. Beit.
41¾	...	9½	Do. .	A. C. Fountaine.
41½	9	5¼	Do. .	C. D. Rudd.
41¼	10	12⅞	Do. .	Hon. Walter Rothschild.
41	9¼	10¾	Matabeleland .	W. Van Ness.
40½	8	13	N.E. Transvaal .	A. M. Naylor.
–40⅜	9½	15	Sabi Flats . .	Dr. Percy Rendall.
40⅜	9⅜	16	Upper Zambesi .	M. C. Greaves-Bagshawe.
40	...	...	Nyassaland . .	S. Pulley.
40	9¼	...	...	Rowland Ward.
40	10	22	Mashonaland .	Abe Bailey.
♀ 39⅛	6¼	6⅝	Do. .	F. C. Selous.

SABLE ANTELOPE (Hippotragus niger)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
39	10	$7\frac{3}{4}$	Mashonaland .	F. B. Dunsford.
39	9	$10\frac{3}{8}$	...	Sir Victor Brooke's Collection.
$38\frac{1}{2}$	$8\frac{7}{8}$	13	Pungwe District .	Capt. F. Lehmann.
$38\frac{1}{8}$	$9\frac{3}{8}$	11	River Umferli, South Africa	F. C. Selous, British Museum.
38	$9\frac{3}{4}$	$14\frac{7}{8}$	Mashonaland .	D. Norman Ritchie.
$36\frac{3}{8}$	$9\frac{5}{8}$	$11\frac{7}{8}$	Near the Lundi River	A. M. Sagar-Musgrave.
$35\frac{1}{2}$	$9\frac{1}{2}$	13	Pungwe District .	Hon. T. Thynne.
$35\frac{3}{8}$	$9\frac{1}{8}$	$8\frac{5}{8}$	South Africa .	Durban Museum.
–♀ $35\frac{3}{8}$	$6\frac{5}{8}$	...	Limbobo . .	F. V. Kirby.
$33\frac{5}{8}$	$8\frac{1}{4}$	$14\frac{1}{2}$	Zanzibar . .	Sir John Kirk, M.D., K.C.B.
$33\frac{1}{2}$	$8\frac{1}{2}$	$13\frac{1}{2}$	Khama's Country	H. A. Bryden.
–$33\frac{1}{4}$	$6\frac{5}{8}$	$3\frac{3}{4}$	Sabi Flats . .	Dr. Percy Rendall.
♀ 32	...	...	South Africa .	H. and A. Glynn.
♀ $31\frac{1}{2}$	7	$12\frac{5}{8}$	Algoa Bay . .	British Museum.

ROAN ANTELOPE (Hippotragus equinus).

Never very plentifully distributed, the great Roan Antelope—a good bull has been known to stand 14 hands at the shoulder—is yearly becoming scarcer in South Africa. At the present time it is most plentiful in the remoter parts of Eastern Mashonaland, and thence towards Portuguese territory on the south-east coast. Mr. G. W. Penrice has lately opened up a new locality for this magnificent antelope, as well as the Sable, in the country behind Benguella, in Portuguese West Africa. Here, however, the bush is so dense and impenetrable, and the difficulties of hunting are so great, that the European hunter is not likely to flock to this region in overflowing numbers. The Roan can be more easily run down upon horseback than the Sable, but has, nevertheless, plenty of pace and bottom. In Gordon Cumming's time this antelope was found and shot by that great hunter, in Griqualand West, just across the Orange River. Like the Sable Antelope, it is extremely savage when wounded, and ought to be approached with care.

HEIGHT at shoulder, adult male, 4 feet 9 inches.

Distribution—South-Western Matabeleland; sparsely in the Transvaal; thence to the Zambesi, Mashonaland, Manicaland, Nyassaland, British East Africa, Abyssinia; also in the Gambia and Angola Territory in West Africa.

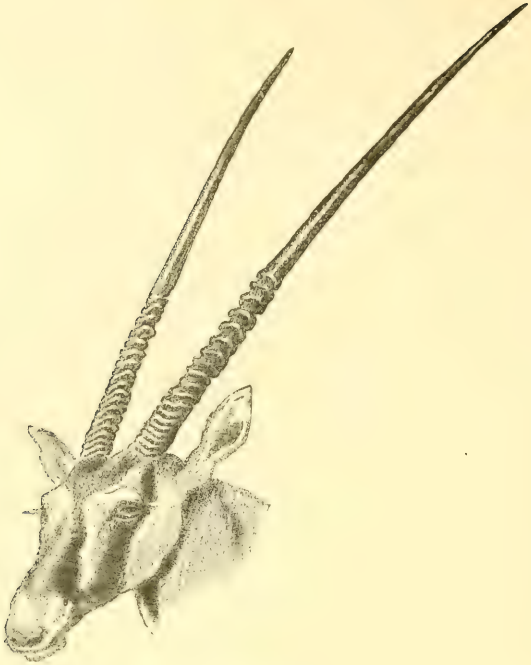
Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
33	...	...	North Matabeleland	A. C. Fountaine.
32	10	13⅜	Mashonaland .	Capt. A. St. H. Gibbons.

ROAN ANTELOPE (Hippotragus equinus)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
32	9½	12	Hanyani River, Mashonaland	F. C. Selous.
31¾	9½	5½	South Africa .	Sir Edmund G. Loder, Bart.
31½	9½	11⅞	Mashonaland .	F. C. Selous.
31	8¾	13	Do. .	J. A. Jameson.
♀ 31½	7	7⅜	Do. .	F. C. Selous.
–30½	...	...	Do. .	Lionel Phillips.
–30½	...	...	Do. .	O. R. Dunell.
29⅞	10⅛	14⅝	Matabeleland .	W. Van Ness.
29⅞	9⅝	11¼	Mashonaland .	Hon. Walter Rothschild.
29¾	9⅞	10	Do. . .	Sir John Willoughby, Bart.
29½	9¼	4	Bahr-el-Salaam, Soudan	Lieut-Col. the Hon. W. Coke.
–28¾	8⅝	12⅛	South Somaliland	Dr. Percy Rendall.
28⅝	9¾	9⅝	Mashonaland .	F. C. Selous, British Museum.
28½	8½	...	Soudan . .	Col. Ralph Vivian.
28½	9	12	Oliphant River, Transvaal	F. V. Kirby.
28	9½	11½	Upper Zambesi .	M. C. Greaves-Bagshawe.
27⅞	8⅜	8¼	...	Sir Edmund G. Loder, Bart.
27⅝	9⅛	9	...	J. Carr Saunders.
27½	9	11½	South Africa .	G. H. Banks.
27⅜	9¾	8½	Do. . .	A. Beit.
27⅛	9¾	9¼	Do. . .	Sir Victor Brooke's Collection.
27	...	...	Soudan . .	The late Sir Samuel Baker, Bart.
26⅞	8⅝	10½	River Gambia .	Dr. Percy Rendall, British Museum.
26¾	8¾	5¾	Mashonaland .	J. G. Millais.
26½	8¾	11	South Africa .	A. Moseley.
26½	9¼	4½	Do. . .	C. D. Rudd.
26	8⅞	7⅛	Gambia . .	Earl of Derby.
♀ 25⅞	6¾	7	South Africa .	F. C. Selous.

ROAN ANTELOPE (Hippotragus equinus)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$25\frac{1}{4}$	$5\frac{1}{8}$	$10\frac{3}{4}$	Matabeleland .	F. H. Barber.
$25\frac{1}{4}$	$9\frac{1}{2}$	$10\frac{1}{2}$	Niger District .	A. J. Arnold.
$25\frac{1}{8}$	$9\frac{3}{4}$	$5\frac{3}{8}$	Soudan . .	Sir Edmund G. Loder, Bart.
24	$9\frac{1}{2}$	$14\frac{1}{4}$	Benguella . .	G. W. Penrice.
$22\frac{1}{8}$	$7\frac{1}{8}$	8	Soudan . .	W. D. James.
$21\frac{7}{8}$	7	$9\frac{1}{8}$	Abyssinia . .	E. Lort-Phillips.
$17\frac{3}{4}$	$6\frac{1}{8}$	$9\frac{1}{4}$	Do. . .	British Museum.



GEMSBUCK (Oryx gazella).

The true home of the Gemsbuck may be said to have been always upon the arid and waterless plains of South-Western Africa. Gordon Cumming, so late as 1846, found these striking antelopes in plenty upon the northern karroos of the Cape Colony, and had immense sport with them. It is some consolation to know that a few still linger in the dry plains south of the lower course of the Orange River. It is still more consoling to remember that, despite a good deal of persecution, very large numbers of Gemsbuck are still to be found in the northern recesses of the Kalahari desert. The Gemsbuck can and does undoubtedly exist for months together without touching water. To this trait, naturally, it owes much of its present immunity. The magnificent horns of this remarkable antelope are in South Africa always regarded as one of the prime rewards of the hunter's skill. And, indeed, to find, run down, and slay one of these desert-bred, wary, and most enduring beasts, is a feat that any man, however well mounted, may be proud of. It is worthy of note that the horns of the cow gemsbuck are invariably longer, finer, and more prized than those of the bull.

HEIGHT at shoulder, 3 feet 9 inches to 4 feet.

Distribution—Deserts of South-Western Africa. Kalahari desert, scarce from Kuruman to Bamangwato, extending as far north as the Mābābe flats, Damaraland, Ovampoland, Senegambia, and the Niger District.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
47½	6¾	17½	South Africa .	The late J. S. Jameson.
–45½	...	...	Do. . .	F. H. Barber.
45	8⅛	18½	Do. . .	Hon. Walter Rothschild.
44⅝	6⅝	21⅞	Bakalahari . .	The late W. C. Oswell.
43⅜	6⅜	18½	Nata River . .	F. C. Selous, British Museum.
43¼	6⅝	20⅞	...	Sir Victor Brooke's Collection.
43⅛	6⅞	...	Botletli River .	F. C. Selous.
43	7	18¾	South Africa .	Rowland Ward.
–43	7½	...	...	Earl of Dartmouth.
42½	7	20½	Bechuanaland .	A. Neilson.
42½	7	...	Do. .	Major Goold-Adams.
42⅞	7	14	...	A. Beit.
42⅜	6¼	19½	Bechuanaland .	Capt. F. Lehmann.
42	6⅛	20¾	...	A. Ryley.
41¼	7	22¾	...	C. D. Rudd.
41	7	19	...	Major R. Hayes-Sadler.
♀ 40¾	6⅝	17⅛	Cunene River .	Capt. F. Cookson.
40⅜	6¾	16½	Transvaal . .	Lewis Atkinson.
40	6⅞	18¼	South Africa .	Sir Edmund G. Loder, Bart.
39¼	6¾	18	Bechuanaland .	Capt. W. Sitwell.
♀ 38¼	6⅝	16⅞	Kalahari . .	H. A. Bryden.
38	...	18¾	Bechuanaland .	A. C. Fountaine.
♀ 36¾	6⅝	...	North Bechuanaland	F. C. Selous, British Museum.
–36½	7½	13	South Africa .	Dublin Museum.
36¼	7⅜	16	Do. .	Hon. Charles Ellis.
35⅝	7⅛	16½	Do. .	H.R.H. Duke of Saxe-Coburg and Gotha.

BEISA ANTELOPE (Oryx beisa).

Somali name—"Beid."

HEIGHT at shoulder about 4 feet.

Distribution—North-East Africa, from Suakin through Abyssinia to Berbera in Somaliland.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
♀ 39	5½	8	Near Hargeisa, Somaliland	E. P. Hare.
36¾	6½	6¾	Do.	Prince Boris Czetwertynski.
36	6½	10½	50 miles from coast, Somaliland	Capt. John Brinckley.
35½	6½	8¾	Somaliland .	Prince Nicolas Ghika.
35	6	9	Do. .	Col. A. Paget.
35	5¾	7⅝	Do. .	A. Trevor.
34½	...	9½	Goli Range .	Ernest Horn.
♀ 34½	6	10½	Somaliland .	Capt. J. M'Call Maxwell.
34½	5¼	8	Do. .	Sir Henry D. Tichborne, Bart.
34½	6¾	8½	Do. .	E. Lee Townshend.
–34⅜	6	10⅝	Do. .	Count Felice Scheibler.
– ♀ 34⅛	5¼	7½	Burgo . .	P. H. G. Powell-Cotton.

BEISA ANTELOPE (Oryx beisa)—*continued.*

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
34	$6\frac{1}{4}$	$7\frac{3}{4}$	Somaliland .	E. N. Buxton.
34	5	9	Do. .	Lord Wolverton.
–$33\frac{3}{4}$	$6\frac{1}{4}$	$8\frac{3}{8}$	Do. .	A. E. Leatham.
$33\frac{3}{4}$	$5\frac{3}{4}$	$8\frac{1}{2}$	Do. .	Digby Davies.
$33\frac{5}{8}$	$6\frac{3}{4}$	$9\frac{3}{8}$	Do. .	A. H. Straker.
$33\frac{5}{8}$	$5\frac{3}{4}$	$8\frac{1}{4}$	Do. .	Capt. H. G. C. Swayne.
$33\frac{1}{2}$	$5\frac{1}{2}$	$7\frac{5}{8}$	Do. .	Col. A. Paget.
$33\frac{3}{8}$	$4\frac{7}{8}$	$7\frac{5}{8}$	Do. .	W. D. James.
$33\frac{1}{4}$	$5\frac{1}{2}$	9	Do. .	Rowland Ward.
–$33\frac{1}{4}$	$5\frac{3}{4}$	$5\frac{3}{4}$	Do. .	C. V. A. Peel.
$33\frac{1}{4}$	$6\frac{1}{8}$	9	Do. .	Major C. C. Ellis.
♀ 33	5	$6\frac{3}{4}$	Do. .	Capt. G. Campbell.
–33	7	$11\frac{1}{4}$	Do. .	Surgeon-Major J. W. H. Flanagan.
$32\frac{3}{4}$	$6\frac{1}{2}$	$8\frac{1}{4}$	Do. .	J. Byng-Paget.
♀ $32\frac{5}{8}$	5	8	Do. .	Major C. H. Villiers.
$32\frac{1}{2}$	$6\frac{1}{2}$	$8\frac{3}{4}$	Do. .	Major H. C. Morland.
–$32\frac{1}{2}$	$6\frac{1}{2}$	$10\frac{1}{2}$	Do. .	Capt. G. Douglas.
$32\frac{3}{8}$	$6\frac{1}{4}$	$6\frac{1}{4}$	Do. .	Lord Delamere.
32	$6\frac{3}{4}$	6	Do. .	T. W. Greenfield.
–$31\frac{1}{2}$	$4\frac{7}{8}$	$11\frac{1}{4}$	Do. .	Dr. Percy Rendall.
$31\frac{1}{4}$	$6\frac{7}{8}$	$8\frac{1}{2}$	Do. .	C. G. Dodgson.
$31\frac{1}{4}$	$5\frac{1}{8}$	$8\frac{1}{2}$	East Cent. Africa	A. H. Neumann.
♀ 31	$5\frac{1}{4}$	7	Somaliland .	Capt. W. L. H. Paget.
$30\frac{3}{4}$	7	8	Do. .	Major C. F. Blane.
$30\frac{1}{2}$	6	$7\frac{3}{4}$	Do. .	Capt. G. R. Cuninghame.
$30\frac{1}{2}$	$5\frac{1}{2}$	7	Do. .	H.R.H. Duke of Saxe-Coburg and Gotha.
$30\frac{1}{8}$	5	$8\frac{1}{4}$	Gebilkin Fullah	C. Liddell.
30	$6\frac{3}{4}$	$7\frac{1}{2}$	Somaliland .	Capt. G. F. T. Leather.

BEISA ANTELOPE (Oryx beisa)—*continued.*

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
30	7	$8\frac{1}{2}$	Somaliland .	J. Kenneth Foster.
$29\frac{1}{4}$	$5\frac{5}{8}$	$9\frac{7}{8}$	Do. .	Hon. Walter Rothschild.
29	$5\frac{1}{2}$	$8\frac{1}{4}$	Do. .	H.R.H. le Duc d'Orleans.
$28\frac{5}{8}$	6	$7\frac{7}{8}$	Do. .	Sir Edmund G. Loder, Bart.
$25\frac{3}{4}$	$4\frac{5}{8}$	$8\frac{3}{8}$	Abyssinia . .	British Museum.

BEATRIX ANTELOPE (Oryx beatrix).

Distribution—Interior of Arabia ; inhabiting the Red Sand of Nejd and the districts which border the same. They are also met with on the borders of the Great Desert south of Orman. Has very rarely been shot by sportsmen.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-26\frac{13}{16}$	$4\frac{3}{4}$	$10\frac{1}{4}$	Arabia . .	Paris Museum.
$23\frac{3}{4}$	5	$9\frac{1}{4}$	Do. . .	Sir Edmund G. Loder, Bart.
$23\frac{1}{2}$	$5\frac{1}{4}$	$9\frac{1}{4}$	...	Rowland Ward.
♀ 15	$3\frac{3}{8}$	$4\frac{1}{2}$	Head of Persian Gulf . .	B. T. Ffinch, British Museum.

LEUCORYX (Oryx leucoryx).

Distribution—Kordofan and adjoining territory in North-Eastern Africa.

Length.	Circumference.	Tip to Tip.	Habitat.	Owner.
$39\frac{5}{8}$	$4\frac{7}{8}$	$14\frac{1}{8}$	...	British Museum.
$37\frac{5}{8}$	$5\frac{1}{4}$	$7\frac{1}{4}$	...	Do.
$35\frac{5}{8}$	$5\frac{1}{2}$	$11\frac{7}{8}$	...	J. Carr Saunders.
35	$5\frac{1}{8}$	12	...	Sir Edmund G. Loder, Bart.
$33\frac{7}{8}$	$5\frac{1}{2}$	8	...	Hon. Walter Rothschild.
24	$4\frac{1}{4}$	$8\frac{3}{4}$	...	Sir Edmund G. Loder, Bart.

EAST AFRICAN ORYX (Oryx callotis).

Type—British Museum.

"Cherva" of the Swahilis.

HEIGHT at shoulder, 48 inches (Count Felice Scheibler).

Mr. E. Gedge says:—"This antelope is not unfrequently met with in East Africa generally, though it seems in a great measure to prefer the bush country. I have encountered it in Teita, Kikumbulin, and near Lake Baringo; goes either singly, or in small herds; very shy."

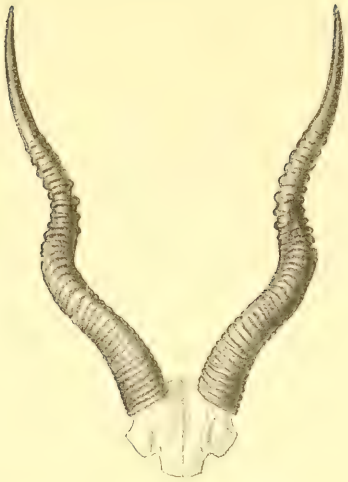
Distribution—East Africa, Kilima'njaro, and Galla country, Masailand and adjoining territory.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
30½	5¾	10½	East Africa . .	F. J. Jackson.
30¼	...	6	Sabaki River District	T. W. Greenfield.
-30	...	10	East Africa . .	Sir John Willoughby, Bart.
29½	5⅝	7⅜	Do. . .	Sir Robert Harvey, Bart.
29	6	6½	Masailand . .	Lieut.-Col. the Hon. W. Coke.
29	5¼	11½	Do. . .	Sir Edmund G. Loder, Bart.
28¾	5⅝	6	Do. . .	H. C. V. Hunter.
♀ 28⅝	4¾	12¼	Do. . .	H. Charrington.
27¾	6⅞	10¼	Do. . ..	F. J. Jackson.

EAST AFRICAN ORYX (Oryx callotis)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
27⅛	6⅞	8½	Masailand . .	Sir Robert Harvey, Bart.
27	6	9	Do. . .	E. Gedge.
27	7⅛	7⅜	Do. . .	H. C. V. Hunter.
26¾	7	9	Do.	J. Gardiner-Muir.
♀ 26¾	5½	10	Do. . .	Capt. R. A. J. Montgomerie, C.B., R.N.
26⅝	7	13	Do. . .	Sir Robert Harvey, Bart.
–24	7	8½	Do. . .	Count Felice Scheibler.
23	5½	8	Do. . .	W. Astor Chanler.
21 *	6¾	10	Do. . .	Rowland Ward, British Museum.

* The type specimen from which this Antelope was described was presented by me to the British Museum. Until the date of my noticing its points of difference, this variety had been referred to as *Oryx beisa.*—R. W.



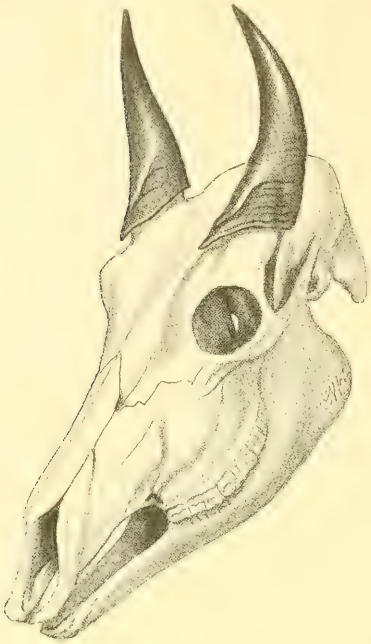
ADDAX (Addax nasomaculatus).

HEIGHT at shoulder about 3 feet 6 inches.

This antelope has rarely been shot by Europeans. It closely approaches the South African Gemsbok in size. Female horns more slender than male, as in the Oryx.

Distribution—North Africa, Arabia, and Southern Algeria.

Length.		Circumference at base.	Tip to Tip.	Habitat.	Owner.
Along front curve.	Straight line.				
37¾	31¾	5¾	23½	Sahara . .	W. Barry.
35¾	28	6⅜	13⅝	North Africa .	Hon. Walter Rothschild.
35½	28	6½	13½	Do. . .	Rowland Ward.
35	29	6½	14	Do. . .	W. Barry.
34¼	27¾	6½	17	Do. . .	A. Pease.
33⅞	28⅜	5⅞	22	Do. . .	Sir Edmund G. Loder, Bart.
33½	26	5½	12¼	Do. . .	Hon. R. A. Ward.
32¼	26⅛	6⅛	13½	Do. . .	Rowland Ward.
31⅝	26¼	6⅜	17⅜	Do. . .	F. H. Barber's Collection.
28¾	24⅞	5½	12⅝	Do. . .	British Museum.



NILGHAI (Boselaphus tragocamelus).

Bahar name—"Ghoora paraes."

HEIGHT at shoulder of specimen shot by Lieut.-Col. H. Wade-Dalton, at Nimar, Central Provinces, 53 inches.

Distribution—The Peninsula of India, from the base of the Himalayas to the south of Mysore. Common in parts of the Eastern Punjab, the North West Provinces, Guzerat, and the Central Provinces; rarer to the southward (W. T. Blanford).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$9\frac{1}{4}$	$6\frac{3}{4}$	$4\frac{7}{8}$	...	British Museum.
$8\frac{7}{8}$	$6\frac{5}{8}$	$3\frac{1}{2}$	...	A. O. Hume, Private Collection.
$8\frac{7}{8}$	$6\frac{1}{2}$	$5\frac{1}{4}$	Central Provinces	C. D. Twopeny.
$8\frac{1}{2}$	$5\frac{1}{2}$	$4\frac{1}{4}$	Do.	Marquis of Dufferin and Ava.
$8\frac{1}{2}$	$7\frac{1}{2}$	$4\frac{3}{4}$	Do.	Capt. E. H. R. Hibbert.

NILGHAI (Boselaphus tragocamelus)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–8½	6½	6	India . . .	Dublin Museum.
–8⅜	7¾	6½	Grey Cat Rump .	Dr. Percy Rendall.
8¼	7⅛	7¾	North India .	Sir Victor Brooke's Collection.
–8¼	7·80	6·70	Ulwar . . .	Baron Edmond de Poncins.
8⅛	6⅛	5	..	Hume Collection, British Museum.
8	6¾	6¼	Nimar, Cent. Prov.	Lieut.-Col. H. Wade-Dalton.
7¾	5½	5¼	...	Rowland Ward.
7⅝	6⅛	5¼	...	Hume Collection, British Museum.
–7½	...	...	Ahmedabad .	T. E. Buckley.
–7½	...	...	Kathiawar . .	Lieut.-Col. L. L. Fenton.
7½	...	..	Panarah District .	Capt. A. Hicks-Beach.
7¼	7	5	...	Sir Edmund G. Loder, Bart.
7¼	5¼	6½	...	A. Wilson.
7⅛	6⅜	4⅞	Central Provinces	Hon. Walter Rothschild.
6¾	5¼	4¾	Do.	Marquis of Ailsa.
6⅝	5¼	5¾	Do.	H.R.H. Duke of Saxe-Coburg and Gotha.

Shot in the Webbe Shebayle River District, Somaliland, by Capt. H. G. C. Swayne.

BUSHBUCK (Tragelaphus sylvaticus)—South Africa.
Do. (Tragelaphus scriptus)—East Africa.
Do. (Tragelaphus decula)—Somaliland and Abyssinia.

The thicket-loving Bushbuck is still to be found plentifully in the southern portions of Cape Colony, the Trans-Kei, Natal, and along the south-eastern littoral wherever bush and covert flourish. Even in the vicinity of large towns, such as Port Elizabeth, these antelopes are abundant, and at the well-known Easter hunts, when driving is resorted to, heavy bags are made. To obtain these big bags, however, preservation during a great portion of the year is largely adopted in Cape Colony. In some districts farther from the sea-board, where the animals have become scarcer, Bushbuck are absolutely protected for a year or two by legislative enactments. In other districts the ewes only are protected. The Bushbuck Ram is a most handsome and plucky little beast, and the unsophisticated should remember that its charge, when wounded, is not by any means to be made light of.

HEIGHT at shoulder about 2 feet 6 inches.

Distribution—All along the coast-line of the Cape Colony and Natal, on the banks of the Limpopo, the Zambesi, and some of its tributaries. Southern bank of the Chobe River (F. C. Selous), Nyassaland, British and German East Africa as far west as the Mau Forest; also in Webbe River District, Somaliland, Abyssinia, and in the Gambia, Niger, and Angola districts of West Africa.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
17⅞	6¼	5⅞	Zanzibar . .	Sir John Kirk, M.D., K.C.B.
17¼	6	5¼	North-East Gazaland	A. M. Naylor.
16½	6¼	5	Somaliland . .	A. H. Straker.
–16½	...	...	South Africa .	A. Bowker, Grahamstown Museum.
–16	6½	..	Kalamba Hills .	F. V. Kirby.
16	6	7¼	Somaliland . .	Capt. H. G. C. Swayne.
15¾	6	8⅝	Zululand . .	A. H. Neumann.
15¾	5	3¾	Do. . .	Capt. L. O. Williams.
15¾	...	...	South Africa .	F. H. Barber.
15⅝	5¼	5	Pungwe District .	Hon. T. Thynne.
15½	5½	3⅝	Transvaal . .	C. F. Eustace.
15½	5¾	9¼	South Africa .	Rowland Ward.
15⅜	6⅜	7½	Do. . .	Major-General Arthur Ellis, C.S.I.
15⅜	5½	7⅛	Zululand . .	Hon. Charles Ellis.
–15½	...	...	South Africa .	H. and A. Glynn.
15½	5⅜	4½	Do. . .	F. C. Selous.
14¾	5⅜	6¾	Shiré River . .	H. H. Williams.
14¾	5¼	6½	Zululand . .	Lieut.-Col. the Hon. W. Coke.
14⅝	5¾	2¾	Matabeleland . .	G. H. Banks.
14⅛	6⅞	5	Somaliland . .	A. H. Straker.
14⅛	5	7	Pungwe District .	Julius Jeppe.
14	5⅞	6⅛	South Africa .	C. D. Rudd.
14	5⅞	5¾	Matabeleland .	H. and C. Beddington.

BUSHBUCK (Tragelaphus sylvaticus)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
13⅞	5¾	5½	South Africa .	H.R.H. Duke of Saxe-Coburg and Gotha.
–13¾	6¼	6	Natal . . .	T. E. Buckley.
13¾	5¾	6½	South Africa .	Hon. Walter Rothschild.
13¾	5½	5⅜	...	Sir Edmund G. Loder, Bart.
13⅝	5½	5½	East Africa . .	H. C. V. Hunter.
13⅝	5⅜	4⅛	...	Sir Victor Brooke's Collection.
13½	5½	7	South Africa .	F. C. Selous.
13½	5¼	5⅜	Do. . .	British Museum.
13½	5⅛	4⅜	Do. . .	Sir John Willoughby, Bart.
13	5½	7	Benguella . .	G. W. Penrice.
13	6¼	5⅛	East Africa . .	F. J. Jackson.
13	5¼	5	Pungwe District .	G. L. Bonham.
12¾	5	4½	South Africa .	A. E. Capell.
12⅝	5	5¼	Abyssinia . .	W. D. James.
11¾	5⅛	4½	Uganda . .	Capt. Speke, British Museum.
11¾	5	6⅜	East Africa . .	Sir Robert Harvey, Bart.
–11½	...	4	Do. . .	Sir John Willoughby, Bart.
11½	5¼	3⅝	South Africa .	H.R.H. Duke of Saxe-Coburg and Gotha.
11¼	4⅜	4½	East Africa . .	F. J. Jackson.
11	5⅛	5	Settite River District	Col. Ralph Vivian.
10¾	4½	5	Niger Territory .	A. J. Arnold.
10½	4½	2¼	Gambia . .	Earl Derby, British Museum.
–9⅜	4½	6⅛	Songwe, Lake Nyassa.	John Yule.

SITUTUNGA ANTELOPE (**Tragelaphus spekei**).

The Situtunga, sometimes called Speke's Antelope (*Nakong* of the Lake Ngami Bechuanas), the most shy and retiring of all the water-loving antelopes, is, from the very nature of its habits and mode of life, seldom accessible to the average sportsman. Even the indefatigable Mr. Selous, who tried hard to shoot a specimen on the Chobe River swamps some years ago, had to retire defeated, although he picked up a fine ram, which had been recently killed—apparently by another animal of the same species. The Situtungas conceal themselves during the day in the dense reed-beds, and are seldom or never seen by hunters, although they may be, and are abundant enough. At night they emerge on some reedy island, only to betake themselves to the impenetrable swamps again before earliest dawn. The natives kill them by firing the reed-beds and spearing the antelopes as they cross open water. The name Water Kudu, bestowed on this antelope by the Trek Boers during their wanderings towards the west coast, is by no means a bad one. The Situtunga is very closely related to the Inyala of the south-east coast of Africa, as may be at once seen by a comparison of the horns.

Mr. A. B. Phipps of the B.B. Police, in a letter to me dated October 1895, says:—"The Situtunga locate themselves on the banks of the Okavango River and the swamp bearing the same name. The reason of these animals being so rare is this: the Okavango River altered its course some years ago, and does not now flow into the Botletli, but runs about 90 miles farther north, hence these animals come down to the Botletli River for water and are shot down. From all sources I fancy they are likely in a couple of years to be extinct."

In Uganda and the Lake Region generally Mr. E. Gedge says it

is very rarely met with, as it frequents the densest swamps and most impenetrable jungles. The only specimens procured by Mr. Gedge were shot on a small rocky island densely covered with bush, and far out in the Victoria Lake, though how they got there is a mystery.

HEIGHT at shoulder about 3 feet 8 inches.

Distribution.—The swamps of Central and Southern Central Africa, now getting very scarce.

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
On front curve.	Straight line.				
35	28	7½	15½	South end of Lake Tanganyika	John Yule.
–33	...	...	...	...	Alfred Ebden.
32⅝	27	7½	16⅜	Chobe River .	F. C. Selous.
32½	...	...	...	...	C. T. Jones.
31⅞	25¾	8⅛	17¼	Near Linyanti .	F. C. Selous.
31½	24⅜	7	16⅛	Chobe River .	F. C. Selous, British Museum.
31⅛	25 9/16	7⅞	14⅝	Congo . .	S. de Brazza, Paris Museum.
–30½	...	...	...	...	O. R. Duneli.
28	23¾	7¾	19⅞	...	The late W. C. Oswell.
27	21¾	6⅞	12	Chobe River .	The late J. S. Jameson.
26¾	21¾	7¼	11⅜	...	W. Van Ness.
26½	21¾	7½	17	Chobe River .	Frank Harris.
26	22⅝	7	17½	...	Sir Victor Brooke's Collection.
–...	25	...	...	Banks of Okavango River	A. B. Phipps.
25⅞	22¼	7¼	19⅜	Chobe River, Mashonaland	F. C. Selous, British Museum.
25½	...	8	12	Tashl Swamp, 40 miles north of Lake Ngami	J. A. Nicolls.
24	20	7½	11¼	Barotseland .	E. D. Scott.
23⅝	...	7¼	10	...	Major Goold-Adams.
23	20¼	...	5⅞	...	F. H. Barber.
22¾	19½	10	7½	...	Hon. Walter Rothschild.
–17¼	...	5¾	7	Victoria Lake .	E. Gedge.
15⅜	14⅛	5⅜	8¾	Victoria Nyanza	Hon. Walter Rothschild.

WEST AFRICAN HARNESSED ANTELOPE (**Tragelaphus gratus**).

This Antelope has very seldom been collected by sportsmen, and consequently very little is known of its habits except in captivity. The Zoological Gardens at Amsterdam have bred several specimens.

HEIGHT at shoulder about 3 feet 9 inches.

Distribution—West Africa (Gaboon District).

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
On front curve.	Straight line.				
$25\frac{1}{2}$	22	8	...	French Congo .	Hon. Walter Rothschild.
$-24\frac{11}{16}$	$21\frac{1}{4}$	$7\frac{3}{8}$	$6\frac{1}{2}$	West Africa .	Dr. Percy Rendall.
$-23\frac{1}{2}$	$20\frac{1}{8}$	$8\frac{1}{8}$	$9\frac{1}{16}$	Do. .	Do.
...	19	...	...	Gaboon . .	British Museum.
$23\frac{1}{2}$	18	$7\frac{7}{8}$	$11\frac{3}{4}$	Do. .	Sir Victor Brooke's Collection.
-21·5	...	7·8	...	..	Berlin Museum.
-17	$14\frac{3}{16}$	$6\frac{3}{8}$	...	Ogooné . .	Paris Museum.

Drawn from a specimen shot near Chiromo, British Central Africa, by Surgeon J. Dowson, R.N.

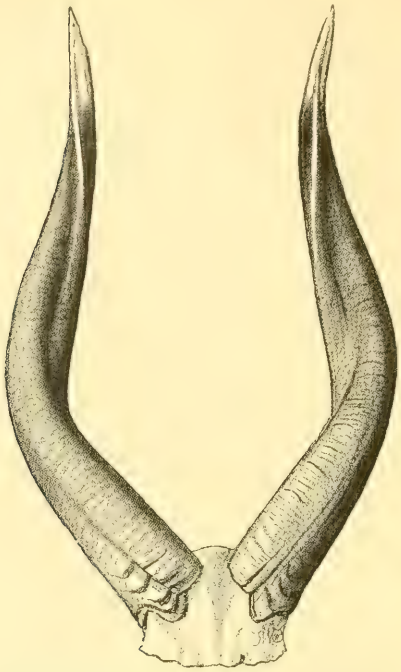
INYALA (Tragelaphus angasi).

HEIGHT at shoulder about 3 feet 7 inches.

Distribution—South-East Africa, Zululand (St. Lucia Bay), Delagoa Bay, Nyassaland, and Angola.

INYALA (Tragelaphus angasi)—*continued.*

Length. On front curve.	Length. Straight.	Circumference.	Tip to Tip.	Habitat.	Owner.
–29¼	...	...	...	Delagoa Bay .	F. H. Barber.
–29⅛	...	...	...	...	O. R. Dunell.
–28½	...	...	...	...	Russell Bowker.
28½	23¾	8	12¾	Zululand . .	Hon. Walter Rothschild.
28	24	8	15	Katanga, British Central Africa	John Yule.
28	23	7¼	13¼	Near Chiromo, Brit. Cent. Africa	Surgeon J. Dowson, R.N.
28	...	8⅛	10⅛	South Africa .	British Museum.
–28	24¼	7½	11¾	Delagoa Bay .	C. T. Jones.
27⅝	22½	7⅞	9½	South Africa .	Sir Victor Brooke's Collection.
–27½	23	8½	13	Do. . .	E. D. Scott.
27½	22¼	7⅝	8½	...	C. D. Rudd.
27⅜	...	8⅛	10⅛	South Africa .	Sir Edmund G. Loder, Bart.
–27⅛	23½	...	14	Delagoa Bay .	H. and A. Glynn.
27	...	8	9⅛	Shiré River . .	F. V. Kirby.
27	22⅝	7¾	11¼	...	J. R. Buckler.
–26½	22	7¼	7	Delagoa Bay .	Frank Harris.
–26½	22½	7⅝	6⅛	...	Dr. Percy Rendall.
26¼	22	6⅞	11⅝	...	F. C. Selous.
26	...	7⅜	8⅞	Zululand . .	Hon. Charles Ellis.
25⅛	20¾	6¾	10	Near Chiromo .	Surgeon J. Dowson, R.N.
23⅜	20	7⅝	11⅝	Zululand . .	Durban Museum.
23⅛	19	6⅞	7	Do. . .	A. H. Neumann.
22	...	...	...	St. Lucia Bay .	G. F. Angas.
20¾	17¼	6¼	5	Benguella . .	G. W. Penrice.



Drawn from type specimen in British Museum.

THE BONGO ANTELOPE (Tragelaphus euryceros).

Distribution—West Africa (Liberia, Fantee, the Ashkanholoo Mountains, and the Guban).

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
On front curve.	Straight.				
31¾	26½	9¾	12⅜	West Africa .	Sir Victor Brooke's Collection.
30¾	24⅞	10⅞	12¾	Do. . .	Do.
30	24½	8¼	14	Gaboon . .	Sir Edmund G. Loder, Bart.
30	24⅛	9⅝	11¼	Ashkanholoo Mountains .	British Museum.
29½	25⅞	9¾	10⅛	Gaboon . .	P. Du Chaillu, British Museum.
27⅝	23¾	10⅛	10⅝	Fantee . .	Do.

GREATER KUDU (Strepsiceros kudu).

The Kudu flourishes in many parts of Africa south of the Zambesi, notwithstanding the eagerness with which the grand horns of the male are sought by hunters and collectors. To this survival, its suspicious habit, extreme wariness, wonderful powers of scent and hearing, and the bushy nature of the country in which it is to be found, all contribute. Even so far south as the jungly district of Uitenhage, in Cape Colony, this magnificent antelope is to be found. Here, however, the Kudu is carefully preserved by English farmers. In Eastern Mashonaland the Kudu is very abundant. Although one of the largest of the antelopes,—a good bull kudu will stand 5 feet at the withers,—it is astonishing how, in bushy country, this animal is able to conceal itself and to steal through the densest and thorniest thickets. On hill-sides, where it is often found, some excellent, if very difficult, stalking may be had. Upon the flat, where, however, it is seldom surprised, the Kudu is no great performer, and can be run into by a good horse with tolerable ease. Excellent specimens of the greater Kudu have been recently shot in Portuguese West Africa, behind Benguella.

One shot in Somaliland measured 4 feet 8 inches at shoulder (Count Felice Scheibler); do. 5 feet, Somaliland (T. W. H. Clarke); do. 4 feet 6¾ inches, British Central Africa (Dr. Percy Rendall).

Distribution—Northern Transvaal, Bechuanaland, Mashonaland, Manicaland, Matabeleland, Lake Ngami Region, Ovampoland, Nyassaland, Teita country to north of Athi River, Somaliland, Abyssinia.

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight line.	On outside curve.				
48½	63	12½	49½	Macloutsie . .	E. W. Tompson.
46	58	11⅝	39	S.E. Mashonaland .	J. G. Millais.
–45½	...	...	...	...	F. H. Barber.
45⅜	57¼	10¾	35	British Central Africa	N. C. M'Donald.
–45¼	61½	...	...	South Africa . .	O. R. Dunell.
45⅜	60⅝	11½	33	Macloutsie River, Khama's Country	F. C. Selous.
45⅛	55⅞	11¼	37⅛	South Africa . .	The late W. C. Oswell.
–45 1/16	59¾	...	39⅜	Pungwe River District	Capt. A. St. H. Gibbons.

GREATER KUDU (Strepsiceros kudu)—*continued.*

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight line.	On outside curve.				
44⅞	57¼	11¾	34⅜	South Africa . .	Sir Edmund G. Loder, Bart.
44½	60¾	12	29	Do. .	Frank Harris.
44¼	59	10¼	26	Do.	The late J. S. Jameson.
44¼	56¼	11⅜	33¼	Do. .	Hon. Walter Rothschild.
–44	60⅝	...	31	Do. . .	H. and A. Glynn.
44	56	10¾	39	Do. . .	F. B. Dunsford.
–44	58	11	44	Limbobo Veldt .	F. V. Kirby.
43⅞	61¼	10⅝	29	South Africa . .	Rowland Ward.
43½	56½	11½	26½	Matabeleland . .	W. Van Ness.
43½	54½	11½	33¾	South Africa . .	Hon. Walter Rothschild.
43	57⅛	11⅝	34¾	Mashonaland . .	H. and C. Beddington.
43	57	14	32	South Africa . .	A. Moseley.
43	56	10¾	43	Mashonaland . .	F. C. Selous.
42⅝	56½	10⅜	38¾	...	Sir Victor Brooke's Collection.
42¼	57	11	31	...	M. Dundas Graham.
42⅛	56½	9½	40¾	South Africa . .	Lewis Atkinson.
42	52¼	11½	35	Natwani River .	R. J. Cuninghame.
42	52	10⅜	33	...	W. F. Webb.
41⅞	52⅛	10¾	39⅝	Zululand . . .	Hon. Charles Ellis.
41¼	55	11¾	28	Matabeleland . .	Major R. Hayes-Sadler.
41¼	49½	11	30	Khama's Country .	H. A. Bryden.
41	57½	11⅛	21½	N.E. Transvaal .	A. M. Naylor.
41	54	11	37¾	...	Sir Edmund G. Loder, Bart.
41	53⅝	10	25	Mashonaland . .	J. A. Jameson.
40¾	54¼	10½	39½	Zululand . .	C. H. Akroyd.
40½	55	12½	32½	...	C. D. Rudd.
40¼	52⅜	10	36½	Zululand . .	Major-Gen. Arthur Ellis, C.S.I.

GREATER KUDU (Strepsiceros kudu)—*continued.*

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight line.	On outside curve.				
40	54	11¼	24	South Africa . .	Capt. W. F. Sitwell.
40	52⅞	10⅛	37	Delagoa Bay . .	Sir John Kirk, M.D., K.C.B.
39⅞	49⅞	10⅞	40½	Limpopo River District	R. M. Sagar-Musgrave.
39¾	52¾	9¾	25⅝	Mashonaland . .	Sir John Willoughby, Bart.
39¾	51½	10¼	28⅝	South Africa . .	W. P. Rylands.
39¾	50½	10½	35	Zululand . .	Hon. Charles Ellis.
39½	55½	10¾	26½	Mashonaland . .	A. Neilson.
39½	57	9⅝	36½	Somaliland . .	H.R.H. le Duc d'Orleans.
–39	50	10½	48½	Khama's Country .	H. A. Bryden.
39	54½	11	27½	South Africa . .	Dublin Museum.
38⅞	54⅛	10¼	22⅝	Somaliland . .	P. H. G. Powell-Cotton.
38½	50¼	8½	29½	Do. . .	The late F. L. James.
38¼	54½	11	26	South Africa . .	Durban Museum.
38	50½	10	36⅝	Somaliland . .	Digby Davies.
38	49	8⅞	29⅜	Do. . .	C. Liddell.
38	50½	9½	30¾	Do. . .	Capt. G. Campbell.
38	...	12	36	Do. . .	Earl of Dartmouth.
38	48	10½	36	Lake Ngami . .	J. A. Nicolls.
–37¾	49½	10½	19½	Somaliland . .	C. V. A. Peel.
37½	46¾	9¾	39¼	Do. . .	F. G. Gunnis.
37⅛	47¼	10¼	35½	South Africa . .	H.R.H. Duke of Saxe-Coburg and Gotha.
37	48½	9¾	35¼	Somaliland . .	E. N. Buxton.
37	48	10½	27¾	British Central Africa	Comdr. A. T. Hunt, R.N.
37	53½	9⅝	23	Somaliland . .	E. Lort-Phillips.
36½	52	10	39½	Do. . .	E. N. Buxton.
36½	47½	10¼	27⅝	South Africa . .	British Museum.
36½	51½	11	29	Zululand . . .	A. J. Brandon.

GREATER KUDU (Strepsiceros kudu)—*continued.*

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight line.	On outside curve.				
36	49½	9½	31¼	Somaliland . .	Major C. F. Blane.
–36	46	9½	16	Do. . .	Count Felice Scheibler.
35¾	47⅞	9⅞	24⅝	Do. . .	A. H. Straker.
35¾	47	10½	33½	Do. .	J. Kenneth Foster.
35½	47½	9½	26½	Do. . .	Prince Nicolas Ghika.
35½	49¼	10	21	Do. . .	C. G. Dodgson.
35	50	9½	13½	Do. . .	Capt. J. M'Call Maxwell.
35	47½	8¾	38⅜	Soudan . . .	Colonel Ralph Vivian.
35	48	10½	30	Somaliland . .	W. W. Ashley.
35	45	9⅜	32⅛	Kaokoland, West Africa	Capt. F. Cookson.
34¾	46½	10	25¼	Soudan . . .	Lieut.-Col. the Hon. W. Coke.
34½	43½	9¾	29	Benguella . .	G. W. Penrice.
34½	46½	9½	...	Abyssinia . .	British Museum.
...	44	9	...	North Africa . .	Capt. Brinckley.
34¼	47⅛	10	21	Somaliland . .	Major C. C. Ellis.
–34¼	45⅜	9½	11 1/16	Do. . .	Paris Museum.
33¾	46½	9½	24½	Do. . .	Capt. H. G. C. Swayne.
32½	41	9⅛	30½	Do. . .	Major H. C. Morland.
31⅛	45½	9½	18½	Do. . .	Lord Delamere.
29	...	9½	17	Do. . .	T. W. Greenfield.

Horned females occur very rarely, but a specimen, with horns measuring 26¾ inches on the curve, is in possession of Mr. C. T. Jones of Cape Town, another is in Mr. F. C. Selous' collection, see *Field*, 4th February 1893.

LESSER KUDU (Strepsiceros imberbis).

Somali name—" Anderio."

Mr. E. Gedge says :—" The Lesser Kudu is decidedly uncommon in East Africa, and I only met with them on three occasions. Likes bush country and the vicinity of water. Specimens obtained on the Kiboko River in Kikumbulin, and seen in the Teita District, East Africa, never more than two or three at a time."

HEIGHT at shoulder about 3 feet 6 inches.

Distribution—German and British East Africa, Somaliland.

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight line.	On outside curve.				
26¼	35¼	7½	16½	N. Somaliland .	Norman B. Smith.
26	33	7½	9½	Do. .	Do.
26	34	6¾	14¼	Somaliland .	W. W. Ashley.
25½	30⅝	6⅜	11⅛	Somaliland, Cadabursi Country	A. H. Straker.
25¼	31½	6⅜	11⅝	Do. .	Sir John Kirk, M.D., K.C.B.
25⅛	32½	7	8	Do. .	Capt. J. R. Harkness.
25	31¼	7	10	Do. .	Capt. G. F. T. Leather.

LESSER KUDU (Strepsiceros imberbis)—*continued.*

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight line.	On outside curve.				
24½	31¼	6¾	14½	Somaliland, Gadabursi Country	Capt. H. G. C. Swayne.
24½	...	6⅛	14¼	Do.	Rowland Ward.
24⅜	30¾	6⅝	11⅞	Do.	W. D. James.
24	30¾	6⅞	9	20 miles north of Hargeisa	E. P. Hare.
24	31½	6¾	...	Somaliland	Major C. C. Ellis.
–24	...	...	...	Do.	Bombay Natural History Society's Museum.
24	30¼	6⅝	11⅞	Do.	H.R.H. le Duc d'Orleans.
23½	29	6½	11⅛	East Africa	Sir Robert Harvey, Bart.
23½	29	6¾	13½	Somaliland	J. Kenneth Foster.
23¼	28¼	7⅛	10	Do.	T. W. Greenfield.
–23	28⅝	7	11	Do.	Dr. Percy Rendall.
–23	30½	6½	8½	Teita, East Africa	E. Gedge.
23	...	6¾	10¾	Somaliland	Col. Arthur Paget.
23	29½	6½	13¾	Do.	Prince Demeter Ghika.
23	28⅛	5½	11⅝	Do.	Sir John Kirk, British Museum.
23	28	...	15	Do.	Surgeon-Major J. W. H. Flanagan.
22⅞	29⅜	6⅛	14⅛	Do.	Lord Delamere.
22½	28¾	6¾	11	Do.	Sir Henry D. Tichborne, Bart.
22¼	29⅜	6⅜	13⅝	Do.	E. Lort-Phillips.
22⅛	26⅞	5½	12¾	South Somaliland	Sir John Kirk, M.D., K.C.B.
22	28	6¾	9½	Somaliland	Major C. H. Villiers.
22	28	6¾	13½	Do.	Dr. Donaldson Smith.
22	27¼	6¼	7¼	Do.	Hon. Walter Rothschild.
21⅞	28⅞	6½	9	East Africa	H. C. V. Hunter.
21¾	26¼	6½	12⅝	Somaliland	Major H. C. Morland.
21⅝	27¼	6½	12¾	South Somaliland	Sir John Kirk, M.D., K.C.B.
21½	26⅛	6½	12¾	Somaliland	F. G. Gunnis.

LESSER KUDU (Strepsiceros imberbis)—*continued.*

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
Straight line.	On outside curve.				
$21\frac{1}{2}$	$28\frac{3}{4}$	5	9	East Africa .	Sir Edmund G. Loder, Bart.
$21\frac{1}{4}$	$25\frac{3}{4}$	$6\frac{1}{2}$	$12\frac{3}{4}$	Somaliland .	Count Felice Scheibler.
21	...	...	...	Do. .	J. D. Inverarity.
21	$27\frac{1}{4}$	$6\frac{1}{2}$	7	Do. .	Rowland Ward.
$20\frac{5}{6}$	$25\frac{5}{8}$	$6\frac{3}{8}$	11	Do. .	Paris Museum.
20	24	6	14	East Africa .	W. Astor-Chanler.

ELAND (Oreas canna).
Do. (Oreas derbianus).

The unstriped Eland of Africa south of the Zambesi, which is unknown to the north of that river, is now, thanks to the unrelenting war of extermination waged against it for two hundred years past, becoming extremely scarce. It may indeed be said with truth that, except in the Northern Kalahari, where large herds of these magnificent antelopes still roam, the unstriped Eland is now almost shot out of South Africa. Towards the Zambesi, and eastward and northward into the Continent, the striped variety (*Oreas derbianus*) takes the place of *Oreas canna*. The unstriped Eland attains larger proportions than its striped congener. In the good days, when these beasts were plentiful, bulls have been shot measuring 6 feet 6 inches at the shoulder. If the enormous bulk of a fat bull Eland is remembered, this measurement is, for an antelope, prodigious. The Elands still to be found in the Kalahari wander far from any water, and, during seven or eight months in the year, subsist entirely without that element. When found, no game is so easily run up to by the mounted man as the Eland, and, as a rule, no game falls more quickly to the bullet.

HEIGHT at shoulder, 5 feet 9 inches (F. C. Selous). WEIGHT of adult male, about 9 cwt.

Distribution—The Kalahari desert: north of Bamangwato, along the roads leading to Lake Ngami, and to the Victoria Falls of the Zambesi. In all country between the Botletli and Chobe rivers; between the Chobe and Zambesi rivers (F. C. Selous); Manicaland, Matabeleland, Mashonaland, Nyassaland; British and German East Africa, Kaokoland, Gambia, and Angola.

Length, straight line.	Circumference.	Tip to Tip.	Habitat.	Owner.
40	13½	(single horn)	...	Berlin Museum.
–39⅜	...	...	...	Paris Museum.
34¼ *	14⅛	22¾	Gambia . .	Sir Edmund G. Loder, Bart.
–34	13½	...	...	F. Coburn.
34 *	12¾	...	...	J. Carr Saunders.
–34 *	11½	17	Gambia . .	Dublin Museum.
32½ *	12½	29⅞	Do. . .	Earl of Derby, British Museum.
32½ *	9¼	12¾	...	Sir Edmund G. Loder, Bart.

* *Oreas derbianus.*

ELAND (Oreas canna)—*continued.*

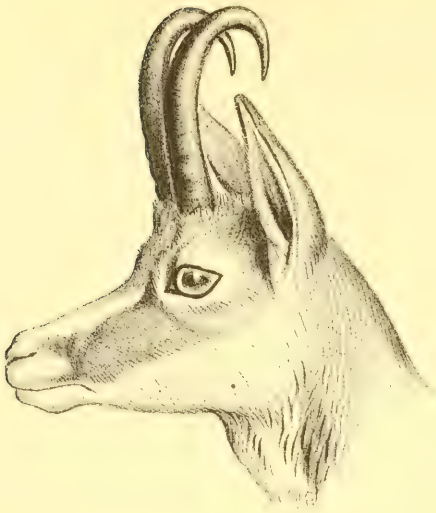
Length, straight line.	Circumference.	Tip to Tip.	Habitat.	Owner.
♀ 32¼	6¾	...	Near Chobe River	M. C. Greaves-Bagshawe.
32¼	...	...	...	Carl Hagenbeck.
♀ 32⅛	7⅛ (triangular horns)	8¾	...	Justice Hopley.
32 *	13	24½	...	Hon. Walter Rothschild.
31⅞ *	11⅝	28⅝	Senegambia .	Earl of Derby, British Museum.
31¾	12¼	22¾	...	Hon. Walter Rothschild.
♀ 31¾	7¾	17	Matabeleland .	Major R. Hayes-Sadler.
31⅝	10¼	25½	East Africa . .	F. J. Jackson.
♀ 31½	8¼	20⅜	Mashonaland .	F. C. Selous.
31½	12¾	12½	Near where Salisbury now stands	Do. British Museum.
31⅛ *	12	18⅝	...	Sir Victor Brooke's Collection.
–31	9½	21	Nyassaland . .	F. V. Kirby.
30⅞ *	10¾	26¾	...	F. W. Reade, British Museum.
♀ 30	7¼	20¼	Hanyani River .	M. Dundas Graham.
– ♀ 30	...	...	South Africa .	Lionel Phillips.
–29¾	9½	9	Brit. Cent. Africa	H. C. M'Donald.
–29¾	9½	9	Do.	Dr. Percy Rendall.
29½	8	22	Do.	Comdr. A. T. Hunt, R.N.
29½	7½	8	Do.	C. D. Rudd.
29	12½	14	Mashonaland .	Abe Bailey.
29	8¼	13¾	Benguella . .	G. W. Penrice.
28¾	13½	4½	Matabeleland .	W. Van Ness.
28½	10⅞	6⅞	South Africa .	C. D. Rudd.
♀ 28½	7¾	6½	Kalahari . .	H. A. Bryden.
28⅛	10⅞	12½	...	Sir Edmund G. Loder, Bart.
27⅞	11	16	Mashonaland .	Sir John Willoughby, Bart.
–27 9/16 *	13⅜	23⅝	Senegambia . .	Paris Museum.

* *Oreas derbianus.*

ELAND (Oreas canna)—*continued.*

Length, straight line.	Circumference.	Tip to Tip.	Habitat.	Owner.
–♀ 27	...	10	East Africa . .	Sir John Willoughby, Bart.
27	11	10¾	Pungwe River .	Marquis of Hamilton.
26¾	12	16⅝	Kalahari . .	H. A. Bryden.
26	8¼	10⅛	Kaokoland, West Africa	Capt. F. Cookson.
25¾	10⅛	12	East Africa . .	H. C. V. Hunter.
–25½	10½	8	North Africa .	Count Felice Scheibler.
25¼	11	16¼	Pungwe River .	G. L. Bonham.
♀ 25⅛	6¼	9⅛	East Africa . .	Sir Robert Harvey, Bart.
24⅜	6¼	15⅛	Do. . .	F. J. Jackson.
24¼ *	9	6¼	Senegambia .	F. W. Reade, British Museum.
–24	...	12	East Africa . .	Sir John Willoughby, Bart.
–23	10½	10½	Gambia, W. Africa	Dublin Museum.

* *Oreas derbianus.*



CHAMOIS (Rupicapra tragus).

HEIGHT at shoulder, 24 inches. WEIGHT of male about 65 lbs.; female, 45 to 50 lbs. Tschudi records one 125 lbs.

Distribution—Mountains of Central and Southern Europe, from the Pyrenees to Caucasus.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–12	4	...	Hinter Riss .	Duke of Saxe-Coburg and Gotha.
–12	...	...	Tyrol . . .	Count Arco.
11¼	3½	6½	...	Col. Howard.
–11	4	...	Tyrol . . .	W. A. Baillie-Grohman.
10¾	3½	4½	Do. . . .	Sir Edmund G. Loder, Bart.
10¾	3½	4½	Do. . . .	Do.
10½	2¾	5	...	Count Meran.
10¼	3½	5¼	...	E. N. Buxton.
–10¼	3	5⅜	...	Count Palffy.
10¼	4⅛	3⅞	Tyrol . . .	Sir Edmund G. Loder, Bart.

CHAMOIS (Rupicapra tragus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–10¼	...	...	Transylvania .	C. G. Danford.
10	3⅝	4¾	Do. .	J. G. K. Young.
9⅞	3¼	4¼	Tyrol . . .	H.R.H. Duke of Saxe-Coburg and Gotha.
9¾	3¼	3⅞	Transylvania .	C. G. Danford, British Museum.
9⅝	3¼	4½	Caucasus . .	St. George Littledale.
9⅝	3½	4	Austrian Tyrol .	Capt. R. A. J. Montgomerie, C.B., R.N.
9⅝	3	3⅝	...	Hon. Walter Rothschild.
–9½	3	3½	Alps . . .	Dublin Museum.
9·05	3·15	4·75	Savoy . . .	Baron Edmond de Poncins.
9	3	5¼	Pyrenees . .	Sir Victor Brooke's Collection.
9	3¼	4	Tyrol . . .	Julius Jeppe.
♀ 9	2¾	4½	Styria . . .	Maj.-Gen. Arthur Ellis, C.S.I.
8¾	3⅜	4⅛	Austrian Tyrol .	Do.
8¾	3⅜	3	Caucasus . .	St. George Littledale.
8¼	3⅛	3⅜	...	Sir Clement Hill, Bart.
8⅝	3½	2⅜	Caucasus . .	St. George Littledale.
8½	2⅝	4	Alps . . .	J. Gould, British Museum.
♀ 8⅜	2¼	4⅜	Pyrenees . .	Sir Victor Brooke's Collection.
♀ 8⅛	3	2	Caucasus . .	St. George Littledale.
8	2⅝	...	Asturias . .	H. Brinsley Brooke.

Drawn from a specimen shot in Nepal, now in British Museum.

GORAL or HIMALAYAN CHAMOIS (Cemas goral).

HEIGHT at shoulder, 26 and 28 inches (Major A. E. Ward). WEIGHT, 58 lbs. (P. H. G. Powell-Cotton); do. 58, 59, and 63 lbs. (Major A. E. Ward).

Distribution—Himalayas, from Bhotan and Sikim to Kashmir, at elevations from 3000 to 8000 feet.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–8½	...	...	Bussahar . .	Major A. E. Ward.
–8	...	...	Kumaon . .	Do.
8	3¾	3⅛	Chumba . .	Cecil Levita.
7⅝	3¾	3½	...	Hume Collection, British Museum.
7¼	3	3	Chumba . .	F. W. H. Walshe.
–7⅛	3¾	3⅝	Jhelum Valley, Kashmir	P. H. G. Powell-Cotton.
–7	...	...	Punjab . .	Capt. A. Hicks-Beach.
6⅞	3½	2⅞	...	Owen Bevan.

GORAL or HIMALAYAN CHAMOIS (Cemas goral)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$6\frac{7}{8}$	$4\frac{1}{8}$	3	Kumaon . .	A. S. Crum.
$6\frac{3}{4}$	...	...	...	Capt. R. H. Rattray.
$6\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{4}$	...	Rowland Ward.
$6\frac{3}{8}$	3	$1\frac{1}{2}$	...	Sir Edmund G. Loder, Bart.
6	4	$2\frac{3}{4}$	...	J. E. Vaughan.
♀ $5\frac{1}{2}$	$2\frac{1}{2}$	$1\frac{3}{4}$	Jhelum Valley, Kashmir.	P. H. G. Powell-Cotton.

The undermentioned specimens are in the Paris Museum :—

	Collected by	Length.	Girth.	Tip to Tip.	
Cemas edwardsi (type)	Père R. David .	$8\frac{11}{16}$	$7\frac{1}{2}$	4	Tibet Moupin.
,, ,,		$8\frac{5}{16}$	$7\frac{1}{8}$	2	
,, *argyrochœtus* (type)	Do. .	$9\frac{1}{2}$	$7\frac{1}{8}$	4	Ta - tsien - lou Setchuan.
,, *caudatus* (type) .	Do. .	$6\frac{5}{16}$	$3\frac{9}{16}$	$3\frac{1}{8}$	North of Pekin.
,, *cinerus* (type) .	Do. .	$7\frac{1}{2}$	$3\frac{1}{8}$	$3\frac{5}{16}$	Tibet.
,, *griseus* (type) .	Do. .	$4\frac{3}{4}$	$3\frac{1}{8}$	$2\frac{3}{8}$	Do.

JAPANESE GORAL (Nemorhædus crispus).

Distribution—Japan.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$5\frac{1}{4}$	$3\frac{1}{8}$	$3\frac{1}{8}$	Japan . . .	British Museum.

Drawn from a specimen shot by W. T. Blanford in Sikim, now in British Museum.

HIMALAYAN SEROW or FOREST GOAT (Nemorhædus bubalinus).

WEIGHT, 120 and 190 lbs. (Major A. E. Ward). HEIGHT at shoulder, 33, 37, and 38 inches.

Distribution—Throughout the Himalayas, from Kashmir to Sikim, chiefly at elevations from 6000 to 12,000 feet.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–12	...	...	Ganges Valley .	Major A. E. Ward.
–11	...	...	...	Capt. R. H. Rattray.
10½	5⅜	3½	...	Hon. Charles Ellis.
10⅛	...	...	Hills north of Mussooree.	Capt. Harry Brooke.
10	...	...	Kumaon . .	Major A. E. Ward.
9⅞	5⅝	4½	...	Sir Victor Brooke's Collection.
9¾	5⅛	6	Pir Punjal . .	R. Lydekker, British Museum.
9½	5⅝	4¾	Kashmir . .	St. George Littledale.
9½	4⅞	3¼	Nepal . . .	B. H. Hodgson, British Museum.

HIMALAYAN SEROW or FOREST GOAT (Nemorhædus bubalinus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$9\frac{1}{2}$	$5\frac{5}{8}$	$3\frac{3}{4}$	...	Sir Edmund G. Loder, Bart.
$9\frac{3}{8}$	$5\frac{1}{8}$	4	Sind Valley .	P. H. G. Powell Cotton.
$-8\frac{9}{16}$	$5\frac{3}{16}$	3	Gurwhal . .	Lieut.-Col. L. L. Fenton.
$8\frac{1}{2}$	$4\frac{3}{4}$	4	Pir Punjal . .	N. C. Taylor.
$8\frac{1}{2}$	$5\frac{1}{4}$	$4\frac{1}{2}$	Kashmir . .	Col. R. Pole Carew.
8	$4\frac{3}{4}$	$4\frac{3}{4}$	Near Darjeeling .	R. Lydekker, British Museum.
♀ $7\frac{1}{2}$	5	$2\frac{1}{2}$	Gangootri . .	R. J. Heber-Percy.
$-6\frac{1}{4}$	$3\frac{3}{4}$	$3\frac{1}{4}$	Darjeeling . .	Dr. Percy Rendall.
$-5\frac{15}{16}$	$3\frac{13}{16}$	$3\frac{3}{16}$	Do. . .	Do.

THE BURMESE GOAT ANTELOPE or SEROW (Nemorhædus sumatrensis).

Closely allied to *N. bubalinus*, but frequents lower ground.

HEIGHT at shoulder, $34\frac{1}{2}$ inches (W. T. Blanford).

Distribution—From the Eastern Himalayas, Moupin and Yunnan to Sumatra, throughout the Assam Hills, Burma, Siam, and the Malay Peninsula or Hills (W. T. Blanford).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
9	$5\frac{1}{2}$	5	Burma . .	The late A. G. Trapmann.
9	5	2	Sumatra . .	Hume Collection, British Museum.
$8\frac{3}{4}$	$5\frac{1}{4}$	$4\frac{1}{2}$	...	Do.
$-8\frac{3}{8}$	$4\frac{7}{8}$	$2\frac{1}{8}$	Perak . . .	Perak Museum.
$8\frac{1}{4}$	5	$3\frac{1}{2}$	Upper Burma .	Hon. Walter Rothschild.
$-8\frac{1}{8}$	$5\frac{1}{8}$	$5\frac{1}{4}$	Perak . . .	Perak Museum.
$7\frac{3}{4}$	$4\frac{5}{8}$	$4\frac{1}{4}$	Assam . .	A. M. Long.
$7\frac{1}{2}$	$4\frac{3}{4}$	5	...	Duke of Bedford.
$-7\frac{1}{8}$	$4\frac{7}{8}$	$3\frac{3}{8}$	Gara Hills, Assam	Dr. Percy Rendall.
$5\frac{7}{8}$	$3\frac{3}{4}$	$3\frac{5}{8}$	Moulmein, Tenasserim	Lieut. R. C. Beavan, British Museum.

ROCKY MOUNTAIN GOAT (Haploceros montanus).

HEIGHT at shoulder, 2 feet 11 $\frac{7}{8}$ inches (Count Felice Scheibler).

WEIGHT, about 180 to 300 lbs. (Baillie-Grohman).

Measurements of specimen recorded below shot by Count Felice Scheibler at Kootenay Lake :—

LENGTH, from tip of nose to end of tail, 4 feet 10 $\frac{1}{8}$ inches.
" " root " 4 feet 5 $\frac{1}{4}$ inches.
GIRTH, 4 feet 5 $\frac{5}{8}$ inches.

Distribution—N. America: throughout the Rocky Mountains, from about lat. 36° ; in California at least as far north as lat. 60° (Lydekker).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–11 $\frac{1}{2}$	...	...	...	Clive Phillipps-Wolley.
–10 $\frac{1}{2}$	5 $\frac{3}{4}$	...	Montana . .	Walter James.
–10 $\frac{1}{8}$	6 $\frac{1}{2}$	...	Similkameen River, British Columbia	Arthur Pearse.
10 $\frac{1}{8}$	5	6 $\frac{1}{8}$	...	E. N. Buxton.
–♀ 10 $\frac{1}{8}$	4 $\frac{3}{4}$	...	British Columbia	Capt. A. Egerton.
9 $\frac{3}{4}$	5	...	Montana . .	Theodore Roosevelt.
9 $\frac{5}{8}$	5 $\frac{1}{4}$	6 $\frac{1}{8}$	Do. . .	Sir Edmund G. Loder, Bart.
9 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{4}$	North America .	St. George Littledale.
9 $\frac{1}{2}$	4 $\frac{1}{2}$	...	Do. . .	J. D. Cobbold.
–9 $\frac{3}{8}$	5 $\frac{3}{8}$	6 $\frac{3}{4}$	Bitter Root Mountains, U.S.A.	T. W. H. Clarke.
9 $\frac{1}{4}$	5 $\frac{1}{2}$	...	British Columbia	J. Turner-Turner.
9 $\frac{1}{4}$	5 $\frac{1}{2}$	...	North America .	Earl of Lonsdale.
9 $\frac{1}{8}$	...	6	Montana . .	Thomas Bate, British Museum.
9 $\frac{1}{8}$	5 $\frac{1}{4}$	5	British Columbia	Sir Peter Walker, Bart.
♀ 9 $\frac{1}{8}$	4 $\frac{1}{4}$	5 $\frac{1}{8}$	Do. .	Do.
8 $\frac{1}{4}$	4 $\frac{3}{8}$	5 $\frac{1}{4}$	Do. .	Count Felice Scheibler.

TAKIN (Budorcas taxicolor).

HEIGHT at shoulder, 3 feet 6 inches.

Female horns about 12 inches long.

Distribution—Mishmi Hills on the frontier of Assam.

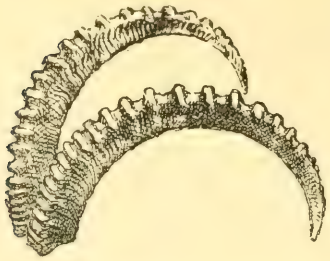
Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–24¼	...	...	Mishmi Hills .	Col. J. Biddulph.
22⅜	10⅝	14¾	Assam . .	British Museum.
–22	12¾	12¼	Do. . .	Bombay Natural History Society's Museum.
20⅞	11⅜	11⅞	Do. . .	Hume Collection, British Museum.
20¾	11⅞	12½	India . .	A. O. Hume, Private Collection.
20¾	10	12⅛	Do. . .	Hon. Walter Rothschild.
20½	10⅞	12⅜	Nepal . . .	B. H. Hodgson, British Museum.
19⅜	11	15	...	Sir Edmund G. Loder, Bart.

TAKIN (Budorcas taxicolor)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–19	...	...	...	Capt. J. Dalton, India Museum.
18	$10\frac{1}{4}$	8	...	British Museum.
$15\frac{1}{4}$	$9\frac{3}{8}$	$5\frac{3}{4}$	Mishmi Hills .	B. H. Hodgson, British Museum.
$14\frac{3}{8}$	$8\frac{3}{4}$	$8\frac{7}{8}$	Upper Assam .	Lieut-Col. Graham.

Budorcas taxicolor, var. tibetanus.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$-19\frac{3}{8}$	$11\frac{1}{2}$	$13\frac{3}{8}$	Tibet . . .	Père R. David, Paris Museum.



HIMALAYAN IBEX (Capra sibirica).

HEIGHT at shoulder of male shot at Nimar, Central Provinces, by Lieut.-Col. H. Wade-Dalton, 42 inches; do. 40 and 41 inches (Lieut. H. M. Biddulph). WEIGHT, 128 to 153 lbs. clean; gross 206 lbs. (Lieut. H. M. Biddulph).

Distribution.—Himalayas, from Kashmir to Nepal, and northwards to Turkestan.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–54⅜	10¼	25	Gilgit . . .	Officers' Mess, Queen's Own Corps of Guides, Punjab. (Picked up by Lieut.-Col. R. E. Hutchinson.)
53¼	10½	20¼	Do. . . .	Col. J. Biddulph.
–51½	...	...	Kashmir . .	Martyn Kennard.
51¼	10½	16	...	Blyth, *P.Z.S.* 1840.
51	9⅛	28½	...	Sir Victor Brooke's Collection.
–50	10¼	21	...	Capt. H. Newton.
–50	11	30½	...	Marquis of Lansdowne, G.C.M.G.
–50	...	...	...	Capt. H. Trevor.
49¾	10⅜	25¼	...	Sir Edmund G. Loder, Bart.
49½	10⅛	42	Kashmir . .	Martyn Kennard.
49	10¼	9½	Skardo . .	Capt. G. Douglas.
48½	9⅝	30½	...	A. O. Hume, Private Collection.
–48½	9¾	34½	Gilgit . . .	Officers' Mess, Queen's Own Corps of Guides.
–48	...	...	Skardo . .	Lieut. J. L. Wood.
48	...	...	Tilail Valley, Kashmir	J. Campbell of Kilberry.

HIMALAYAN IBEX (Capra sibirica)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
47½	10¼	20	...	Rowland Ward.
–47¼	...	...	Thian Shan . .	F. A. Labouchere.
47	11¾	...	...	Carl Hagenbeck.
–47	...	...	Baltistan . .	Capt. E. Guinness.
47	10½	29¾	Kashmir . .	Martyn Kennard.
47	10	...	...	Capt. J. Manners-Smith.
46½	11	24¾	Kashmir . .	Hon. Charles Ellis.
46	9¾	25	...	Sir Victor Brooke's Collection.
45¼	9⅝	24¾	Baltistan . .	Lieut. H. W. Codrington, Officers' Mess, Queen's Own Corps of Guides.
45	10½	26	Astor . . .	F. C. Quicke.
45	10½	29	Ladak . . .	P. H. G. Powell-Cotton.
44⅝	10¾	30	...	A. O. Hume, Private Collection.
44½	11¾	26	...	Capt. Orr-Ewing.
44½	11	19	...	J. Benett-Stanford.
44¼	10	34	Ladak . . .	Lieut.-Col. H. Wade-Dalton.
43¾	9½	16½	Kashmir . .	S. V. Occleston.
43⅝	10¼	24¾	...	Sir Robert Harvey, Bart.
–43½	9¾	19	India . . .	Hume Collection, British Museum.
–43½	...	...	Astor Valley .	Otho Shaw.
–43½	11½	...	India . . .	Major-General Alexander A. A. Kinloch.
43½	9¾	18¾	Kashmir . .	Capt. M. S. Wellby.
43⅛	9⅚	...	Mustagh Raye .	Capt. F. E. Shafto-Adair.
43	12½	35½	Basha Nullah, Baltistan	T. W. Greenfield.
43	11	10	...	Major J. Harden.
43	9¾	28½	...	R. Rankin.
43	10	9	...	E. F. Holden.
42½	10½	22	Kashmir . .	R. J. Heber-Percy.
42	9½	26	Ladak . . .	Lieut.-Col. H. Wade-Dalton.

HIMALAYAN IBEX (Capra sibirica)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–41¾	10	...	Baltistan . .	Lieut. H. M. Biddulph.
41½	9	21	Chitral . .	Capt. R. L. Tottenham.
41	10½	26¾	...	Capt. J. H. Purvis.
–41	10¼	14	Baltistan . .	Major R. Kelham.
41	9¼	26½	Shyok River .	Capt. F. E. Shafto-Adair.
40⅝	10¾	33¾	...	Sir Edmund G. Loder, Bart.
40½	11¼	21½	...	Hon. Charles Ellis.
40	10½	29¼	Baltistan . .	Major C. S. Cumberland.
–40	9½	20	...	Dublin Museum.
–40	9·45	20·45	Kandgort . .	Baron Edmond de Poncins.
39⅝	9	21⅛	Mongolia . .	St. George Littledale.
39½	10	21¾	Ladak . . .	W. R. Codrington.
39½	9½	22½	Do. . . .	Capt. Strachey, British Museum.
39½	9½	14¾	Thian Shan . .	Col. J. Biddulph.
39½	10½	29¾	Kashmir . .	N. C. Taylor.
38½	10	21½	Do. . .	S. Melville.
38½	9⅜	15⅞	Yarkund . .	Dr. Bellow, British Museum.
38¼	10½	19	Kashmir . .	E. Langworthy.
38¼	10⅜	22½	Do. . .	Hon. Walter Rothschild.
38	9½	16	...	David Hanbury.
35⅛	9	11	Saar Mountains, Altai	St. George Littledale, British Museum.
32½	9⅜	10⅛	Thian Shan, Central Asia	British Museum.
–♀ 13⅛	...	...	Tilail Valley .	J. Campbell of Kilberry.
♀ 11⅝	4	5	Kashmir . .	Sir Edmund G. Loder, Bart.
♀ 11¼	4	8¼	Do. . .	Cecil Levita.

CAUCASIAN IBEX (Capra caucasica).

Distribution—Central Caucasus.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
40⅛	12⅝	15¼	Caucasus . .	St. George Littledale.
36⅞	11⅝	27⅝	Do. . .	Do.
30⅝	11⅜	16⅜	Do. . .	Sir Edmund G. Loder, Bart.
22¾ *	10⅞	22¼	Do. . .	St. George Littledale.
19⅞	10⅝	16¼	Do. . .	P. A. Holt, British Museum.

* Cross between *Capra caucasica* and *Capra pallasi*.

ALPINE IBEX (Capra ibex).

WEIGHT, 85 and 106 lbs. clean (Count Hoyos).

Distribution—Switzerland Alps, Savoy and the Tyrol, almost extinct.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–35⅜	9	26¾	Valley of Aosta	H.I.M. The King of Italy.
34½	9¾	...	Styria, Austria .	Sir Edmund G. Loder, Bart.
–34¼	9	26	Valley of Aosta	H.I.M. The King of Italy.
–33⅛	9	39⅜	Do.	Shot by H.I.M. Victor Emmanuel, the late King of Italy.
–31¾	9⅛	18⅜	The Alps, Savoy	Sir Edmund G. Loder, Bart.
–30⅛	9¾	29¾	Valley of Aosta, the Alps	Count Hoyos.
–30	9	21	...	Dublin Museum.
26¾	8⅜	22⅛	Valley of Aosta, the Alps	British Museum.
21½	8⅝	14⅞	Do. .	Do.

PYRENEAN IBEX (Capra pyrenaica).

WEIGHT, about 10 stone clean.

HEIGHT at shoulder, about 2 feet 3 inches.

Distribution—Pyrenees, high ranges of Central Spain, Andalusia, and Portugal.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
31	8¾	...	Pyrenees, Spain	Sir Victor Brooke's Collection.
30¼	9½	...	Spain . .	Abel Chapman and W. J. Buck.
29¾	8¼	23¼	Almeira . .	H. Brinsley Brooke.
28	9⅛	23⅜	Spain . .	British Museum.
27¾	9	25	Do. . .	Sir Edmund G. Loder, Bart.
27½	10⅜	19½	Pyrenees . .	British Museum.
25⅝	8½	16⅝	Spain . .	Hon. Walter Rothschild.
24½	10	14	Val d'Arras .	E. N. Buxton.
22	7¾	14	Spain . .	Pablo Larios.
16	7½	11	Do. .	R. J. Heber-Percy.
10¾	5⅝	7½	Val d'Arras .	A. E. Leatham.
♀ 9½	5⅜	6¼	Do. .	E. N. Buxton.

ARABIAN IBEX (Capra sinaitica).

The Ibex horns very closely resemble the Kashmir type of horn.
Distribution—Upper Egypt, Sinaitic Peninsula, and Palestine.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
50	9	...	Southern Arabia	Capt. John Brinckley.
31⅜	8	13¼	Moculla, Arabia	Dr. Percy Rendall.

WILD GOAT (Capra ægagrus).

Distribution—South-Eastern Europe; the hills of South-Western Asia, from the Caucasus to Sind and Baloochistan.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
52⅜	7⅞	8¾	Sind . .	A. O. Hume, Private Collection. (Shot by Col. F. Marston.)
48¼	8⅜	13⅞	Caucasus . .	British Museum.
46¾	7	14	Sind . .	Sir Edmund G. Loder, Bart.
46½	8⅞	18⅞	Asia Minor .	F. C. Selous.
46	7⅝	11	Sind and Baloochistan Hill	Major C. S. Cumberland.
45¼	8	11¼	Sind . .	Col. J. Biddulph.
44½	8⅞	21⅜	Caucasus . .	British Museum.
44½	8⅝	11	...	Hume Collection, British Museum.
43	8⅛	22⅜	...	J. Carr Saunders.
43⅜	8⅜	14⅝	...	A. O. Hume, Private Collection.
43	9	15¾	Taurus Mountains	Sir Edmund G. Loder, Bart.
43	9⅛	...	Asia Minor .	F. C. Selous.
41½	...	...	Sind . .	Capt. E. C. Tidswell.
39⅝	9⅝	1¼	Erzeroum .	British Museum.
39⅝	7⅞	27	...	A. O. Hume, Private Collection.
36	8¼	6¾	Baloochistan .	Hon. Walter Rothschild.
35⅝	9⅛	13⅜	Mount Ararat .	British Museum.
34½	9½	18	Baloochistan .	Sir Victor Brooke's Collection. (Shot by Major Hogg.)
31	7⅞	15¼	Sind . .	Dr. Percy Rendall.

WILD GOAT (Capra ægagrus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
29⅝	9¼	8⅜	Cilecian Taurus, Asia Minor	C. G. Danford, British Museum.
25¾	7¾	13	Sind . .	C. G. Twopeny.
18½	7¾	9	Asia Minor .	E. N. Buxton.
16	7½	7	Persia . .	R. J. Kennedy.
–16	6	13⅛	Loch Ness, N.B.	C. V. A. Peel.
♀ 10⅞	4⅜	3⅝	Caucasus . .	Sir Victor Brooke's Collection.

NORTH AFRICAN IBEX (Capra nubiana).

Distribution—The Sinaitic Peninsula and Upper Egypt; rare in Palestine.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
46⅛	8	...	North Africa .	British Museum.
42¼	9¼	15¼	Mountain Range of Assoutribai, N.W. of Suakin	Capt. Barttelot.
41¾	7⅝	17⅝	North Africa .	Capt. W. H. Besant.
38⅞	7½	12½	Upper Egypt .	Sir Edmund G. Loder, Bart.
38½	7½	27¼	Suakin . .	Major G. E. Lloyd.
38¼	8	21	Do. . .	Capt. A. King.
35¼	7	15⅜	Sinaitic Peninsula	J. D. Cobbold.
35⅛	7⅛	12	Mountain Range of Assoutribai, N.W. of Suakin	W. P. Gore-Graham.
31⅜	6½	13½	Sinaitic Peninsula	W. Moncreiffe.
20¼	5	8⅜	Do.	E. N. Buxton.
♀ 8¾	3⅛	5¾	Do.	W. Moncreiffe.

DOMESTIC GOAT (Capra hircus).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
52½	10½	40⅝	Great Britain.	Sir. Edmund G. Loder, Bart.
34½	8	25½	Do.	Rowland Ward.

NILGHIRI IBEX or WILD GOAT (Hemitragus hylocrius).

HEIGHT at shoulder: adult males, 39 to 42 inches; do. adult females up to 35 inches.

Distribution—Southern India, Nilghiri and Anaimalai Hills; and the Western Ghauts from the Anaimalais to the neighbourhood of Cape Comorin, chiefly at elevations of 4000 to 6000 feet, but occasionally in suitable places at lower levels (W. T. Blanford).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$16\frac{3}{4}$	$8\frac{7}{8}$	$5\frac{5}{8}$	...	A. O. Hume, Private Collection.
$-16\frac{1}{2}$	...	...	Nilghiri Hills .	St. George Littledale.
$15\frac{1}{2}$	$8\frac{5}{8}$	$7\frac{7}{8}$	Do. .	Sir Edmund G. Loder, Bart.
$15\frac{3}{8}$	$8\frac{3}{4}$	$6\frac{3}{4}$	Do. .	Martyn Kennard.
$15\frac{3}{8}$	$8\frac{1}{4}$	6	Do. .	St. George Littledale.
$15\frac{1}{8}$	$8\frac{5}{8}$	$4\frac{3}{4}$	Do. .	Martyn Kennard.
$15\frac{1}{8}$	$8\frac{5}{8}$	$4\frac{3}{8}$	Do. .	St. George Littledale.
$14\frac{3}{4}$	$8\frac{7}{8}$	$5\frac{1}{2}$	Do. .	R. A. Sterndale.
$14\frac{1}{2}$	$8\frac{3}{4}$	$6\frac{1}{4}$	Do. .	British Museum.
$14\frac{1}{2}$	$8\frac{5}{8}$	$5\frac{1}{8}$	Do. .	Sir Victor Brooke's Collection.

NILGHIRI IBEX or WILD GOAT (Hemitragus hylocrius)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$14\frac{3}{8}$	8	$4\frac{5}{8}$	Anaimalais, South India	T. W. Greenfield.
$-14\frac{1}{4}$	$8\frac{1}{4}$	4	Travancore . .	J. D. Inverarity.
$-14\frac{1}{4}$	8	$4\frac{1}{2}$	Do. . .	A. E. Leatham.
$14\frac{1}{8}$	$8\frac{5}{8}$	$5\frac{1}{2}$	...	Sir Victor Brooke's Collection.
14	$7\frac{3}{4}$	$6\frac{1}{2}$	Travancore . .	Major G. S. Rodon.
14	$7\frac{5}{8}$	$6\frac{3}{8}$	Do. . .	Col. J. Biddulph.
$12\frac{5}{8}$	$7\frac{3}{4}$	$4\frac{3}{4}$	Do. . .	Lord Manners.
$12\frac{1}{4}$	$7\frac{3}{8}$	$3\frac{3}{4}$	Do. . .	Sir Robert Harvey, Bart.
$11\frac{1}{2}$	$7\frac{1}{4}$	$4\frac{1}{4}$	Nilghiri Hills .	Capt. Hunter Blair.
♀ $11\frac{1}{8}$	$5\frac{3}{4}$	...	Travancore . .	Hon. Francis Bridgeman.
$10\frac{1}{2}$	$7\frac{1}{4}$	4	Kundhas . .	Col. R. Pole Carew.
♀ 10	$5\frac{1}{2}$	4	Nilghiri Hills .	St. George Littledale.

THAR (hemitragus jemlaicus).

HEIGHT at shoulder, male, about 40 inches. WEIGHT, about 200 lbs.

Distribution—Himalayas, from Kashmir to Bhutan.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$14\frac{5}{8}$	...	...		H. Vansittart.
$14\frac{1}{4}$	$8\frac{7}{8}$	$4\frac{3}{8}$	Punjab . .	Lieut. A. Cadell.
$14\frac{1}{2}$	$8\frac{7}{8}$	$6\frac{5}{8}$	...	A. O. Hume, Private Collection.
$14\frac{1}{8}$	...	...		Lieut. A. B. Lindsay.
14	...	...		R. L. Tottenham.
14	...	...		Major A. E. Ward.
$13\frac{7}{8}$	9	$8\frac{3}{8}$	Chumba . .	Hugo de Burgh.
$13\frac{7}{8}$	...	...	Do. . .	Major Algernon Heber-Percy.
...	...	...		R. J. Heber-Percy.
$13\frac{3}{4}$	9	$11\frac{1}{4}$	...	Hume Collection, British Museum.
$13\frac{3}{4}$	$8\frac{3}{8}$	$6\frac{7}{8}$	...	A. O. Hume, Private Collection.

THAR (Hemitragus jemlaicus)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
13⅝	8	6¼	...	Hume Collection, British Museum.
13½	8½	6¾	Nepal . . .	Rowland Ward.
13⅜	9⅛	5¾	...	Hon. Walter Rothschild.
13¼	8⅞	5¾	...	Sir Victor Brooke's Collection.
13¼	8¼	6⅞	...	Sir Edmund G. Loder, Bart.
–13	9¾	...	Chumba . .	Capt. A. Hicks-Beach.
–13	9¼	...	Do. . .	Major-General Alexander A. A. Kinloch.
–12¾	9	7¾	Do. . .	H. L. S. MacLean, Officers' Mess, Queen's Own Corps of Guides.
12½	8½	10	...	J. E. Ubsdell.
12¼	8⅞	4¾	...	Sir Robert Harvey, Bart.
12¼	8¼	6½	...	H.R.H. Duke of Saxe-Coburg and Gotha.
11⅞	8⅞	6⅜	...	Sir Victor Brooke's Collection.
11⅝	8¼	7½	Nepal . . .	H.H. the Maharajah Duleep Singh, British Museum.

ARABIAN THAR (Hemitragus jaykari).

Type—British Museum.

Distribution—Jebel Tan Range, South-East Arabia.

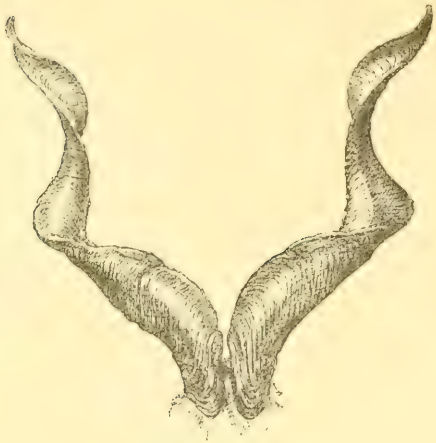
Length on outside curve.	Habitat.	Owner.
295 mm.	Oman Mountains.	Dr. A. S. G. Jayker.

CAUCASIAN BURHEL (Capra pallasi).
Do. (Capra cylindricornis).

HEIGHT at shoulder about 3 feet.

Distribution—Eastern Caucasus.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
38¼	12½	...	Eastern Caucasus	Hon. Walter Rothschild.
34½	10⅞	13½	Caucasus . .	Major Talbot.
33⅜	12	19¾	Do. . .	British Museum.
31	11	28	Northern Caucasus	H. H. P. Deasy.
29½	12	20	Caucasus . .	Sir Edmund G. Loder, Bart.
28½	11	16½	Do. . .	Sir Victor Brooke's Collection.
26½	10⅝	18	Do. . .	Sir Edmund G. Loder, Bart.
22¼	10¾	19½	Northern Caucasus	Arnold Pike.
20½	10	11½	Caucasus . .	H.R.H. le Duc d'Orleans.



Astor variety.

MARKHOR (Capra falconeri), from Astor and Baltistan.
Do. (Capra megaceros), from near Cabul.

Mr. Blanford says: "Throughout the *Bovidæ* no species varies to so great an extent in the form of the horns as the Markhor, and those who have seen but two or three varieties naturally regard them as belonging to distinct species. . . . It is true that heads from one locality are, as a rule, similar to each other, but when a series from various places is examined it appears to me impossible to draw a line between the different types.

An old Gilgit male measured by Col. J. Biddulph was 38·5 inches high, and 55 inches between the horns to the root of tail.

WEIGHT, about 240 lbs. (Major A. E. Ward); do. 184 and 204 lbs. (Lieut. H. M. Biddulph). HEIGHT at shoulder of specimen shot at Kaj-nag, Kashmir, measured by Lieut.-Col. H. Wade-Dalton, 34 inches; do. Lieut. H. M. Biddulph, 38, 40, and 41 inches.

Distribution—The Pir Panjal Ranges south of Kashmir (not east of the Chenab), and the ranges of Baltistan, Astor, and Gilgit to the north. Hazára, and many of the hill ranges of Afghanistan, amongst others the Sulemán Range as far south as Gendári Hill, near Mithankot; also Takatu and Chehiltan, near Quetta (W. T. Blanford).

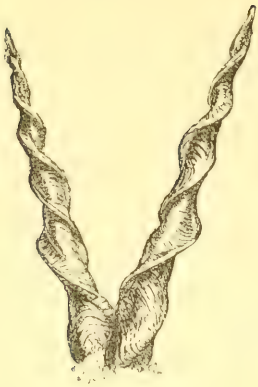
MARKHOR (Capra falconeri) from Astor and Baltistan—*continued.*

Length. On outside curve.	Length. Straight line.	Circumference.	Tip to Tip.	Habitat.	Owner.
–59	...	...	...	Kashmir . .	Major J. C. Shirres, R.A.
–58½	40½	10	38½	Gilgit . .	Marquis of Lansdowne, G.C.M.G.
–56	...	...	...	Astor . .	Capt. H. Trevor.
–56	...	13·30	...	Do. . .	Baron Edmond de Poncins.
–55	...	...	...	Do. . .	Otho Shaw.
54¼	...	10½	26½	...	A. O. Hume, Private Collection.
54	...	10⅝	33¾	Astor . .	Martyn Kennard.
53¼	42½	11½	52 (about)	Do. . .	Sir Victor Brooke's Collection. (Shot by Capt. Harry Brooke.)
53	...	9½	26	...	Major A. E. Ward.
53	38¾	9¾	35½	Gilgit . .	Hon. Walter Rothschild.
52¾	39¾	12⅛	33¾	Astor . .	Martyn Kennard.
52	35	9½	42½	Gilgit . .	F. H. Taylor.
51⅜	37⅛	10	33	Pir Panjal .	Sir Edmund G. Loder, Bart.
51⅛	...	11⅜	49⅜	Astor . .	Martyn Kennard.
51	37	11	42	Do. . .	Rowland Ward.
50	36½	12	36	Chilos . .	Lieut. W. Hayes-Sadler.
50	...	11⅝	35¼	Astor . .	Martyn Kennard.
–50	...	...	...	Do. . .	Capt. H. V. Oliver, R.E.
–49¼	...	10	39	Kaj-nag, Kashmir	P. H. G. Powell-Cotton.
–49	32¼	10¼	43	Gilgit . .	Col. J. Biddulph.
–49	...	11	35	Haramosh .	H. W. Codrington, Officers' Mess, Q.O. Corps of Guides.
49	...	...	42	Astor . .	Otho Shaw.
48½	...	11½	45	Do. . .	Capt. M. Murphy.
48½	...	7¾	(odd horn, Sulemán race)	...	British Museum.
48¼	...	11⅞	29⅜	...	A. O. Hume, Private Collection.
47½	...	11	...	Kashmir . .	Major-Gen. Alexander A. A. Kinloch.
47	36	11⅝	39	Do. . .	Sir Victor Brooke's Collection.

MARKHOR (Capra falconeri) from Astor and Baltistan—*continued.*

Length.		Circumference.	Tip to Tip.	Habitat.	Owner.
On outside curve.	Straight line.				
–47	...	11½	...	Indus Valley .	Lieut. H. M. Biddulph.
46½	...	11½	(odd horn, Astor race)	Astor Valley .	British Museum.
46	31½	10	35	Bovnji . .	Col. F. C. Lister-Kay.
46	33½	10	34½	Astor .	Sir Edward Ion Grogan, Bart.
45½	...	11⅜	37½	Chilos . .	Major C. S. Cumberland.
45	...	...	...	Kaj-nag Valley, Kashmir .	Otho Shaw.
43¾	...	10½	32⅞	Kashmir . .	Hon. Charles Ellis.
42¾	...	12	32½	...	Sir Robert Harvey, Bart.
42½	32½	11¼	32⅝	Astor . .	Hon. Walter Rothschild.
41¼	...	10	30⅞	India . .	St. George Littledale.
41	...	12¼	42⅜	River Indus, Kashmir .	Capt. M. Murphy, British Museum.
41	...	10	27⅜	Pir Panjal, Kashmir (9000 ft.)	R. Lydekker, British Museum.
39⅜	...	10¼	24¼	Afghanistan .	Col. Grant, British Museum.
–37½	...	12	33	Kashmir . .	Dublin Museum.
35½*	30¾	10	25	Baloochistan .	Col. J. Biddulph.
35⅜	(Sulemán race)	9⅞	20⅜	Paghura . .	Lieut. Abbot, British Museum.
♀ 16¼	13⅜	5⅜	13	Astor . .	Martyn Kennard.

* This is the most southern form of Markhor, and approaches very closely those of the Trans-Indus variety.



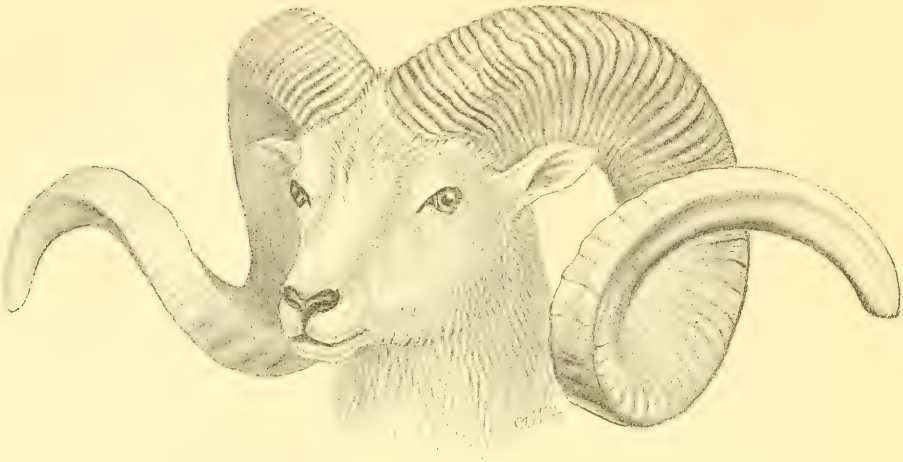
Sulemán variety.

MARKHOR var. (Capri falconeri)—Blanford.
Do. (Capri jerdoni)—Hume.

HEIGHT about 38 inches at shoulder.

Distribution—South of Kashmir in the Pir Panjal Ranges, Afghanistan, Baloochistan, Sulemán Range.

Length, straight line.	Circumference.	Tip to Tip.	Habitat.	Owner.
38½	10½	23⅞	Afghanistan . .	H.R.H. Duke of Saxe-Coburg and Gotha.
–35	...	...	Do. . . .	Major A. E. Ward.
34¾	10⅜	28	Baloochistan . .	The late Capt. E. W. Codrington.
33	9¼	19¾	Afghanistan . .	Sir Edmund G. Loder, Bart.
32¼	9¾	28	...	A. O. Hume, Private Collection.
32½	10	22½	Buner . . .	Officers' Mess, Queen's Own Corps of Guides.
31½	9½	27	Sulemán Range . .	Hon. Walter Rothschild.
30¾	8¾	21½	...	Sir Victor Brooke's Collection.
29¾	8¼	23¾	Baloochistan . .	Capt. R. H. Rattray.
–28	...	...	...	Otho Shaw.
27⅛	8¾	21	Sheikh Boodeen . .	Sir Edmund G. Loder, Bart.
27	9	18	Do. . .	Col. J. Biddulph.
26	8¾	18½	Do. . .	Col. Sir H. Collett.
24	9¾	20	...	Lieut. G. Blois Johnson.
–24 .	...	...	Sheikh Boodeen . .	Major-General Alexander A. A. Kinloch.
22½	10¼	15¾	East Afghanistan .	J. E. Penton.



MARCO POLO'S SHEEP (Ovis poli).

HEIGHT, about 48 inches at shoulder, adult male (Major C. S. Cumberland). WEIGHT of adult male about 22 stone.

Distribution—Central Asia, the Pamir, and Thian Shan of Turkestan.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–75	16	54½	Pamir	General Lord Roberts, V.C.
73	15	48	Little Pamir	Col. Tanner.
–71	15½	53·35	Great Pamir	Baron Edmond de Poncins.
69½	15¼	56	...	Marquis of Lansdowne, G.C.M.G.
68½	15	35¾		Lewis Flower.
68	17	43		Col. R. Pole Carew.
–68	16	52		Indian Museum.
–67⅜	16	53		General Biddulph.
67	16½	42		Col. R. Pole Carew.
66⅞	15⅝	46		Sir Edmund G. Loder, Bart.
66⅞	13⅞	...	Great Pamir	A. O. Hume, Private Collection.
66	15¼	44	Do.	Hume Collection, British Museum.
65½	16	53	Great Pamir (16,000 feet)	Col. T. E. Gordon, British Museum.

MARCO POLO'S SHEEP (Ovis poli)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
-65	16	14½	Central Asia . .	Dublin Museum.
65	16½	49½	...	Major C. F. Blane.
-65	...	...		St. George Littledale. (Presented to the Empress of Russia.)
64½	16½	46	Pamir . . .	Major C. C. Ellis.
64¼	16½	41	Do. . . .	W. Lawrence.
64¼	15¼	39	Do. . . .	H. C. V. Hunter.
63⅝	16⅛	42½	Do.	Hon. Walter Rothschild.
63⅜	15⅜	46¼	Do. . . .	Earl of Dunmore.
62¾	16¼	51	Tagdumbash, Pamir .	T. W. Greenfield.
62	15¼	40	...	Hon. Charles Ellis.
61½	15½	46¼	Tagdumbash, Pamir .	E. L. Phelps.
60¾	15¾	46⅞	Pamir . . .	St. George Littledale.
-60	15¾	46¾	Tagdumbash . .	T. W. Greenfield.
-60	...	...	. .	Capt. H. Bower.
59¾	15½	45⅜	Pamir . . .	Earl of Dunmore.
59	15¾	41	...	Martyn Kennard.
59	14	42¾	Tagdumbash . .	David Hanbury.
58	16	43	Do. . . .	Do.
57¾	15	46¾	...	Major-Gen. Arthur Ellis, C.S.I.
57¾	14¾	50	Pamir . . .	Reginald Beech.
57½	16⅛	49¼	...	W. Lawrence.
57½	14¾	48	Pamir . . .	Reginald Beech.
57	15¼	42	Do. . . .	Hon. R. A. Ward.
56⅞	15⅛	35½	Do. . . .	St. George Littledale.
56	17½	42	...	E. L. Phelds.
55¾	15¾	43	...	J. Carr Saunders.
55⅝	16½	43	Pamir . . .	Major C. S. Cumberland.
55½	16⅞	44	Do. . . .	Sir Edmund G. Loder, Bart.

MARCO POLO'S SHEEP (Ovis poli)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
55	16	44	...	H.R.H. le Duc d'Orleans.
54⅞	15¼	48⅜	Pamir . . .	Sir Victor Brooke's Collection.
54¼	16⅛	34¾	West Chinese Mongolia	St. George Littledale.
54	16¾	39	...	Viscount Fincastle.
53⅞	15⅝	43¾	Lake Karakol . .	St. George Littledale.
52	15½	39	Tagdumbash . .	Capt. J. Manners-Smith.
50½	15	42¾	Altai Plateau, Pamir .	Do. British Museum.
49¼	14½	42	Pamir . . .	Duke of Bedford.
48¼	13¼	33¾	Thian Shan, Yarkand Mission	British Museum.
45	15¼	39¾	Russian Pamir . .	Major C. S. Cumberland.
41¼	14½	29	Siberia . . .	British Museum.
♀ 14·17	5·90	15·75	Great Pamir . .	Baron Edmond de Poncins.
♂ 10½	5½	13½	Tagdumbash . .	David Hanbury.

THE TRUE AMMON SHEEP (Ovis ammon).

Since the compilation of the foregoing pages, Major C. S. Cumberland has returned from the Altai regions of Mongolia with the finest collection of sheep I have ever seen. The best four are far longer than any known, viz.—

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
56½	18½	33½	Mongolia . .	Major C. S. Cumberland.
54¾	18¾	30	Do. . .	Do.
54½	19	35	Do. . .	Do.
54½	19¾	33¾	Do. . .	Do.

Shot in Tibet by Lieut.-Col. H. Wade-Dalton.

THE AMMON SHEEP OF SPORTSMEN (Ovis hodgsoni).

HEIGHT at shoulder, adult male 45 inches. WEIGHT about 250 to 350 lbs.

LENGTH, nose to tip of tail, 76 inches; WEIGHT, about 212 lbs. (Major Greenway).

HEIGHT at shoulder, 43 inches; WEIGHT, 205 lbs.; GIRTH, 50 inches, about ten years old (P. H. G. Powell-Cotton).

Distribution—The plateau of Tibet, from Northern Ladak to the country north of Sikim (W. T. Blanford).

Length on front curve	Circumference.	Tip to Tip.	Habitat.	Owner.
50½	18¼	19	Pangol Lake .	Sir Edmund G. Loder, Bart.
–48½	19	...	Tibet . . .	E. Howard Brooke.
48	16	23	Rudok . .	Capt. G. A. L. Carew.

THE AMMON SHEEP OF SPORTSMEN (Ovis hodgsoni)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
47¾	19	31½	Siberia . .	British Museum.
47	17	...	Tibet . . .	Otho Shaw.
–46½	16½	21	Do. . . .	P. H. G. Powell-Cotton.
46½	19¾	20 (about)	...	A. O. Hume, Private Collection.
–46½	16¾	...	Ladak . .	Lieut. H. M. Biddulph.
–46	19	...	...	Major C. S. Cumberland.
46	16	17	Altai . . .	Hon. R. A. Ward.
45½	16¼	17	...	H.R.H. Duke of Teck.
44⅝	17½	22½	Nepal . . .	B. H. Hodgson.
–44½	17	21⅞	Tibet . . .	A. E. Leatham.
44	16⅛	19¼	Ladak . .	Major C. S. Cumberland.
42½	16½	19	...	A. O. Hume, Private Collection.
–42½	16	15	Ladak . .	Lieut. H. M. Biddulph.
42½	16	18	...	Hume Collection, British Museum.
42½	16	18	Ladak . .	Rowland Ward.
42½	15¼	...	...	J. Carr Saunders.
42½	17	...	...	Major Greenway.
42⅜	16¼	20	Tibet . . .	H.R.H. Duke of Saxe-Coburg and Gotha.
42⅛	16¾	14¼	...	Hume Collection, British Museum.
42	15⅛	17	Near Hanle .	Capt. F. E. Shafto-Adair.
42	...	...	Rudok . .	Capt. G. A. L. Carew.
41⅞	16	...	Tibet . . .	Hon. Walter Rothschild.
41⅛	16¾	19	Ladak . .	Sir Victor Brooke's Collection.
–41	...	18½	Tibet . . .	Major A. E. Ward.
40½	14½	26¼	...	St. George Littledale, British Museum.
40⅜	17⅝	20⅜	Ladak . . .	Hon. Charles Ellis.
40¼	15¾	18¾	...	A. C. Bailey.
40¼	16¼	19	Ladak . .	R. J. Heber-Percy.

THE AMMON SHEEP OF SPORTSMEN (Ovis hodgsoni)—*continued*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–40	...	...	...	Capt. H. Trevor.
–40	17	...	...	Major-General Alexander A. A. Kinloch.
40	...	...	Tibet . .	Otho Shaw.
40	17	19½	Ladak . .	Sir Edmund G. Loder, Bart.
39½	17	14	Do. . .	F. W. H. Walshe.
39¼	17	14¾	Do. . .	Hon. Charles Ellis.
39	17¾	21	Do. . .	Rowland Ward.
39	17	19	...	Sir Robert Harvey, Bart.
38¾	17¾	17	Tibet . .	Lieut-Col. H. Wade-Dalton.
38¼	17⅛	18¼	Himalayas . .	Col. Congreve, British Museum.
38	18	19¼	Ladak . .	Hon. Charles Ellis.
38	17½	18½	Do. . .	F. W. H. Walshe.
–38	16	...	Do. . .	J. Campbell of Kilberry.
37¾	16½	...	Tibet . . .	Sir Robert Harvey, Bart.
37¼	16	16½	Ladak . .	Col. J. Biddulph.
37	16¾	15	Do. . .	Capt. F. E. Shafto-Adair.
–36½	15½	16	Tibet . . .	Dublin Museum.
–35½	16¼	10½	Do. . . .	Major J. W. M. Cotton.
35	15½	20	Ladak . .	Cape Town Museum.
33¾	17¼	14½	Do. . .	Col. F. C. Lister-Kay.
33	16	17½	Tibet . . .	Reginald Beech.
20¼	7⅜	17	Siberia . .	British Museum.
♀ 18½	8½	23	Ladak . .	David Hanbury.
♀ 18	7	19¾	Nepal . .	B. H. Hodgson, British Museum.
♀ 14½	7½	17½	Ladak . .	Sir Victor Brooke's Collection.

BIGHORN SHEEP (**Ovis canadensis**).

HEIGHT at shoulder about 3 feet 2 inches.

This is by far the most numerous of the two varieties inhabiting the American continent. The female's horns are very small in comparison to those of the male, and seldom measure more than 15 inches on the curve from base to tip. Large horns of the male are now very difficult to obtain, and I have seldom of late years seen fresh killed specimens whose horns exceed 38 inches on the curve from base to tip. American sportsmen are very keen to obtain horns of large circumference, and as will be seen by the records here given, they seldom exceed 16 inches.

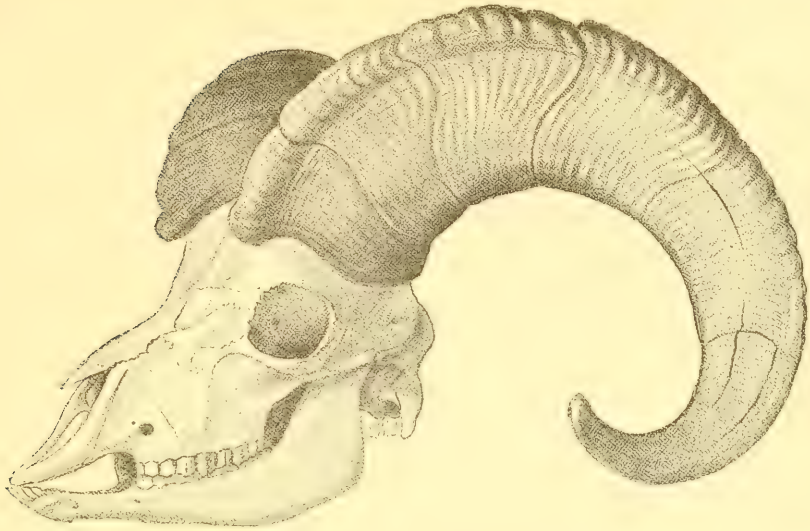
Distribution—From the region of the Upper Missouri and Yellowstone to the Rocky Mountains, and on the high grounds adjacent to them on the eastern slope as far south as the Rio Grande. Said to be abundant on the Mauvaises Terres, but not found to any considerable distance east of the Black Hills. Westward it extends as far as the Cascade and coast ranges of Washington, Oregon, and California, following the highlands of the mountains some distance into Mexico (J. E. Harting in *American Exhibition Catalogue*).

BIGHORN SHEEP (Ovis canadensis)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
-45	...	...	..	W. Grant Mackay.
-42½	16¼	25¾	Lower California .	Geo. H. Gould.
42	16	(tips worn very much)	Wyoming . .	Picked up by T. W. H. Clarke, and measured on the mountains.
-...	17¼	...	Do. . .	T. W. H. Clarke.
-40¾	16½	...	Yellowstone .	British Museum.
40	15¼	...	Rocky Mountains	Otho Shaw.
40¼	15¼	20¼	...	Sir Edmund G. Loder, Bart.
39⅝	15⅜	...	Colorado . .	St. George Littledale.
39½	16½	24¾	Montana . .	British Museum.
39½	15½	19	...	Sir Edmund G. Loder, Bart.
-39	15¾	...	...	W. A. Baillie-Grohman.
-39	14⅛	18½	Rocky Mountains	The late J. S. Jameson.
38⅜	15½	22	...	E. N. Buxton.
38¼	15¼	19¼	Montana . .	St. George Littledale.
38¼	16⅜	...	Bighorn Mountains	H. Seton Karr.
38	17	...	Alberta, North West Territory	Capt. A. Pike.
38	15	...	British Columbia .	Capt. F. Cookson.
37¾	15⅞	23⅜	Mexico . .	J. A. H. Drought.
37¾	16¼	22½	British Columbia .	J. O. Shields.
37¼	15	16	Do.	J. Turner-Turner.
-37	16	31	Wyoming . .	T. W. H. Clarke.
37	16¼	...	Montana . .	Major Maitland Kirwan.
36¾	19	15	British Columbia .	C. H. Kennard.
36¾	15¼	22½	Wyoming . .	Moreton Frewen.
36½	14½	...	Do. . .	Gerald Buxton.
36½	14½	...	...	Thomas Bate.
36½	14	...	Wyoming . .	J. D. Cobbold.
36¼	14⅜	18½	Do. . .	E. N. Buxton.
36	14¾	16½	Montana . .	R. H. Sawyer.

BIGHORN SHEEP (Ovis canadensis)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
36	15½	...	Alberta, North West Territory	Capt. A. Pike.
36	14¾	16	Wyoming . .	G. D. White.
35⅞	15¼	18½	British Columbia .	G. Wrey.
35⅞	13¾	17½	Do.	Hon. S. Tollemache.
35⅛	12¾	16	California . .	Sir Victor Brooke's Collection.
25⅛	15¼	18½	British Columbia .	Sir Peter Walker, Bart.
35	14	18½	Do.	Admiral Sir Michael Culme Seymour, Bart.
35	14	16	Wyoming . .	Gerald Hardy.
35	15	19¾	Do. . .	Count Felice Scheibler.
34½	14½	...	California . .	G. P. Fitzgerald.
34½	14¾	19	Do. . .	J. A. Jameson.
34	16	17	N.W. Wyoming .	Archibald Rogers.
33½	14	...	Do.	Rowland Ward.
33	15⅜	18	British Columbia .	E. Verschoyle.
33	14½	22	...	F. H. B. Ellis.
33	14¾	24½	Wyoming . .	Lieut.-Col. the Hon. W. Coke.
32¾	15½	17½	...	G. C. R. Lee.
32	14¾	17¼	Yellowstone River	British Museum.
32	15¼	19½	British Columbia .	J. W. Wood, jun.
31½	14½	17½	N.W. Territory .	Major R. Heber-Percy.
31	17½	...	Grand Encampment, Wyoming	Frank Cooper.
30⅞	15	23 (about)	...	Hon. Walter Rothschild.
29½	16	18½	North Dakota .	Theodore Roosevelt.
27¾	14½	18½	Colorado . .	Sir Victor Brooke's Collection (from J. H. Batty's Collection).
27½	14½	15 (about)	North Park, Colorado	Col. Ralph Vivian.
♀ 13	6⅞	13¾	Mexico . .	J. A. H. Drought.
♀ 10	5	13½	British Columbia .	Sir Peter Walker, Bart.
♀ 9½	5	10	Montana . .	Sir Edmund G. Loder, Bart.
♀ 4	3¾	6	Yellowstone River	British Museum.



KAMSCHATKA WILD SHEEP (Ovis nivicola).

The horns can be readily distinguished from *O. montana* by the slenderness at the points and their wider tip to tip measurements.

HEIGHT at shoulder, 37 inches. WEIGHT about 330 lbs.

Distribution—Kamschatka, Stanovoi Mountains, as far south as the sources of the Utschur.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
38	13½	26	...	F. H. H. Guillemard's party in the "Marchesa," *P.Z.S.* 1885, p. 675
35½	14	26½	...	Do. do.
34½	11⅞	17¾	...	British Museum.
34	13½	23⅝	Kamschatka .	Hon. Walter Rothschild.
32¾	13½	23	...	Sir Edmund G. Loder, Bart.
–31½	14	26	Kamschatka .	Dublin Museum.
31½	13⅝	21	Cape Chepunske .	Col. J. Biddulph.
–31½	13¾	24	...	Dublin Museum.
27½	13⅝	25½	Kamschatka .	Rowland Ward.
♀ 10¾	5	14½	Do. . .	Hon. Walter Rothschild.

The Sharpoo of Ladak, Oorin of Boonjie and Astor.

OORIAL (Ovis cycloceros).
SHAPOO (Ovis vignei).

HEIGHT of male, 32 inches (W. T. Blanford).

Distribution—In Ladak, Zasker, and Northern Tibet, ranging through Astor and Gilgit to Afghanistan, Baloochistan, and Southern Persia (W. T. Blanford). Mr. Blanford thinks the Oorial identical with the Shapoo, and is found in the Punjab, Salt Range, and in places throughout the ranges west of the Indus, in the Punjab and Sind down to the sea-level.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
39½	10¾	18¼	Punjab . .	F. H. Taylor.
39	11¾	15½	India . . .	Major Sir H. S. Rawlinson, Bart.
–39	...	...	Near Leh . .	E. L. Phelps.
38⅝	12¼	11¼	...	J. Carr Saunders.
–38½	...	...	Jouaka Land .	Royal Artillery Mess at Attock.
37½	10¼	11	...	A. O. Hume, Private Collection.
–37	9	...	...	Major J. C. Shirres.

OORIAL (Ovis cycloceros)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
35½	10½	16	Gulran, Afghanistan	Dr. J. Aitchison, British Museum.
35¼	10½	9½	Punjab	F. H. Taylor.
–35	11½	14	Near Cabul	Major J. W. M. Cotton.
–35	...	...		Capt. H. Trevor.
33¾	12¼	...	Ladak	P. H. G. Powell-Cotton.
–33⅛	11½	10⅝	Do.	Sir Edmund G. Loder, Bart.
33	10½	15	Do.	F. W. H. Walshe.
32½	10	11½		Sir Victor Brooke's Collection.
32⅜	7¾	12	Punjab	Lieut. G. Blois Johnson.
32¼	10	11½	...	Hume Collection, British Museum.
–32	11	9¾	Ladak	Col. J. Biddulph.
31¾	10¼	7	Do.	Col. F. C. Lister-Kay.
–31	10¼	...	Punjab	Major-General Alexander A. A. Kinloch.
31	9⅜	14½	Do.	Capt. R. H. Rattray.
30¾	11¾	11¼	Salt Range	Col. J. Biddulph.
30⅞	9⅞	20⅛	Jhelum, Salt Range	Sir Victor Brooke's Collection.
30½	12	...	Punjab	Rowland Ward.
30	11¾	16	...	Hon. Walter Rothschild.
–30	8½	6½	...	Dublin Museum.
–30	...	...	Ladak	Otho Shaw.
29¾	10½	16½	Sind and Baloochistan Hills	Major C. S. Cumberland.
29⅞	10⅜	...		H. C. V. Hunter.
29½	9	...	Sheik Boodeen, near Dera Ismail Khan	Capt. Harry Brooke.
29	11⅛	...	...	Sir Robert Harvey, Bart.
28½	9	10	Baloochistan	Col. J. Biddulph.
–28	...	...	Gilgit	Otho Shaw.
28¼	9	15½	Kusan, Afghanistan	Dr. J. Aitchison, British Museum.
27½	11⅛	18¼	...	Martyn Kennard.

OORIAL (Ovis cycloceros)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$27\frac{1}{2}$	..	.	Skardo . .	Capt. G. Douglas.
$27\frac{1}{2}$	$11\frac{1}{4}$	19	Astor . . .	H. W. Codrington, Officers' Mess, Queen's Own Corps of Guides.
$27\frac{1}{8}$	$10\frac{1}{4}$	15	Ladak . . .	Capt. F. E. Shafto-Adair.
$26\frac{1}{2}$	$10\frac{1}{2}$	13	Do. . . .	St. George Littledale.
26	...	...	Sind . . .	J. D. Inverarity.
26	...	...	Kolet Khoond, Salt Range	Major-General Alexander A. A. Kinloch.
$25\frac{7}{8}$	$8\frac{1}{8}$	$14\frac{1}{2}$	Punjab . .	Dr. Percy Rendall.
$25\frac{1}{2}$	$11\frac{1}{4}$	$15\frac{5}{8}$	...	Hon. Charles Ellis.
$25\frac{3}{8}$	$9\frac{3}{4}$	$13\frac{3}{4}$	Salt Range, Punjab	Sir Edmund G. Loder, Bart.
$25\frac{1}{8}$	$9\frac{7}{8}$	$17\frac{1}{2}$	Kohrod, Persia .	Sir Victor Brooke's Collection.
25	10	16	Boonjie on Indus .	Major C. S. Cumberland.
$23\frac{3}{4}$	11	18	Astor . . .	Sir Victor Brooke's Collection.
$21\frac{1}{2}$	$9\frac{3}{4}$	$14\frac{5}{8}$	...	Lieut.-Col. H. Wade-Dalton.
20	...	...	Salt Range . .	Otho Shaw.

The Narpoo of Ladak.

BURHEL (Ovis nahura).

HEIGHT at shoulder of adult male, 33 inches (Major A. E. Ward).

WEIGHT, 130 lbs. (Major A. E. Ward).

Distribution—Tibet from Shigar in Baltistan, and near Sanju south-east of Yarkand to Moupin, and from the main Himalayan axis, or in places the high ground south of it, to the Kuenlun and Altyn Tagh. Never found below about 10,000 feet. In summer usually seen about 14,000 to 16,000 (W. T. Blanford).

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
32	...	...		B. H. Hodgson, *P.Z.S.* 1840, p. 66.
31½	13½	22½		J. Campbell of Kilberry.
30⅞	12¼	21⅞		A. O. Hume, Private Collection.
–30½	11	15½	Ladak . .	P. H. G. Powell-Cotton.
29½	11⅝	25½	. .	H.R.H. Duke of Saxe-Coburg and Gotha.
–28½	...	...	...	Capt. H. Trevor.
28½	12¼	26½	Hanle, Ladak .	F. W. H. Walshe.
28	11	20¼	.	Hume Collection, British Museum.
27¾	10¼	10	Tibet . . .	Capt. G. Campbell.

BURHEL (Ovis nahura)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
27¼	11	21½	Ladak . . .	St. George Littledale.
27	...	...	Tibet . . .	Otho Shaw.
27	11½	28	Chinese Tibet .	Major C. S. Cumberland.
26¾	11½	23	Ladak . . .	Col. F. C. Lister-Kay.
26½	10½	20	...	A. S. Crum.
26¼	11⅞	23	...	Sir Victor Brooke's Collection.
26¼	12	21¼	Ladak . . .	Hon. Walter Rothschild.
26¼	10¾	22	India . . .	Sir Edmund G. Loder, Bart.
26	12	20½	Do. . . .	Rowland Ward.
25⅞	12½	31½	East of Padan .	Capt. M. S. Wellby.
25⅞	11¼	18½	...	C. B. Vandeleur.
–25½	11½	...	Tibet . . .	Major-General Alexander A. A. Kinloch.
25⅜	11¼	25¼	Ladak . . .	St. George Littledale.
24½	12¼	26	...	J. Carr Saunders.
24½	...	...	Upper Indus Valley	Col. J. Biddulph.
24⅜	10⅞	27¼	South-east of Leh	Capt. J. A. Orr-Ewing.
24	11	22¾	Nepal . . .	B. H. Hodgson, British Museum.
23½	10	18	Ladak . . .	Capt. F. E. Shafto-Adair.
23⅜	11¾	24¼	...	Sir Robert Harvey, Bart.
23	12	26	Ladak . . .	H.R.H. Duke of Saxe-Coburg and Gotha.
–22¾	12½	23	Tibet . . .	Lieut. H. M. Biddulph.
22¼	10½	23	Ladak . . .	St. George Littledale.
–22	11	...	...	Major A. E. Ward.
–22	9½	21½	...	Dublin Museum.
–22	10½	21	...	Dr. Percy Rendall.
22	11	24	Tibet . . .	Capt. G. Campbell.
21¾	10¼	23	Do. . . .	Capt. G. M'Micking.
21½	11	...	...	H. C. V. Hunter.

Drawn from a specimen in the British Museum, shot by Ford G. Barclay.

MOUFFLON (Ovis musimon).*

HEIGHT at the shoulder, $2\frac{1}{4}$ feet.

Female has seldom any horns, which, when they exist, are ordinarily about 2 inches long.

Distribution—Sardinia and Corsica.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$34\frac{1}{2}$	$8\frac{3}{4}$	$16\frac{3}{8}$	Sardinia . .	W. Moncreiffe.
$29\frac{5}{8}$	$8\frac{3}{4}$	11	Do. . .	Hon. R. A. Ward.
29	$8\frac{3}{4}$	11	Do. . .	W. Moncreiffe.
$28\frac{7}{8}$	$8\frac{1}{8}$	21	Do. . .	E. N. Buxton.
$28\frac{3}{4}$	9	10	Do. . .	Ford. G. Barclay.
27	$8\frac{1}{2}$	10	Do. . .	British Museum.
27	$9\frac{1}{2}$	$10\frac{1}{2}$	Do. . .	Sir Edmund G. Loder, Bart.
-26	$10\frac{3}{8}$	$10\frac{1}{2}$	Corsica . .	Capt. J. Marriott.
$25\frac{1}{2}$	$8\frac{1}{4}$	10	Sardinia . .	Hon. Walter Rothschild.
$24\frac{1}{2}$	$9\frac{1}{8}$	$9\frac{7}{8}$	South-West Sardinia	Sir Victor Brooke's Collection.

* The Moufflon sheep of Corsica and Sardinia, but not, there is reason to suspect, of the Levantine Countries.

CYPRIAN WILD SHEEP or MOUFFLON (Ovis ophion).

Type—Berlin Museum.

This is the smallest of wild sheep, and comparatively a rare trophy. The horns closely resemble the Armenian form, although not quite so massive, curving gradually from the base instead of diverging straightly.

Distribution—Tröodos Mountains of Cyprus.

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–24	8	4·60	Cyprus	The late Lord Lilford.
23½	8·15	12·20	Do.	Col. J. Biddulph.
23	7	5¾	Do.	British Museum.
22⅞	7¼	6	Tröodos Mountains, Cyprus	Gen. Sir R. Biddulph, British Museum.
22¼	8	12¾	Cyprus	Sir Victor Brooke's Collection.
–17½	8	1½	Do.	Dublin Museum.

Arrowi or Fechstal of the Arabs.

AOUDAD (Ovis tragelaphus).

Distribution—Mountain Ranges of North Africa.

Length on outside curve.	Circumference at base.	Tip to Tip.	Habitat.	Owner.
28½	11½	18⅜	Algeria . .	Hon. J. Ward.
28½	11⅝	18½	Do. . .	Sir Edmund G. Loder, Bart.
–27¾	11¼	...	Do. . .	Baron Edmond de Poncins.
26⅜	10¾	15¼	North Africa .	British Museum.
26	11	17¾	Do. . .	Do.
25½	11½	17½	Algeria . .	Hon. J. Ward.
25½	11½	17	North Africa .	F. de Murietta.

AOUDAD (Ovis tragelaphus)—*continued.*

Length on front curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
25	11¼	13½	North Africa	W. E. Pease.
24½	10½	19½	Do. . .	Hon. R. A. Ward.
–20	...	...	Do. . .	A. E. Pease.
19⅞	10⅛	15¼	Atlas Mountains .	Thomas Bate.
19⅝	10	15¼	Do. . .	Capt. G. Cuthbert.
19¼	9¼	16¾	Djobel Matlili .	E. N. Buxton.
♀ 18¼	7½	14¼	North Africa .	Rowland Ward.
17¾	9½	13¾	Atlas Mountains .	W. Barry.
–♀ 17	7½	...	Do. .	Baron Edmond de Poncins.

ASIA MINOR SHEEP (Ovis gmelini).

HEIGHT at shoulder about 2 feet 9 inches.
Females hornless.

Distribution—Mountains of Armenia, Eastern Persia, and Asia Minor.

Length on outside curve	Circumference.	Tip to Tip.	Habitat.	Owner.
40¼	10½	5½	...	W. Burchart Barker, British Museum.
36¼	10⅜	5¾	.	British Museum.
30½	10⅝	18	...	Sir Victor Brooke's Collection.
26·10	8½	12·20	Taurus . .	C. G. Danford, *P.Z.S.* Feb. 1808.
24	9⅝	17	Cilician . .	Col. J. Biddulph.

DOMESTIC SHEEP (Ovis aries).

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$39\frac{1}{2}$	$8\frac{3}{4}$	21	...	H. E. Surtees.
37	$8\frac{1}{4}$	20	Loch Awe, N.B.	H. Murray.
$35\frac{1}{2}$	8	$16\frac{7}{8}$	...	Sir Victor Brooke's Collection.
33	11	$22\frac{1}{4}$	Yarkand . .	Hume Collection, British Museum.
32	$8\frac{5}{8}$	$27\frac{3}{4}$	Do. . .	Do.
$28\frac{3}{4}$	8	$21\frac{1}{2}$	Scotland . .	Rowland Ward.
$22\frac{5}{8}$	$9\frac{1}{2}$	$20\frac{1}{4}$	Yarkand . .	Hume Collection, British Museum.
$22\frac{3}{8}$	$9\frac{1}{4}$	$22\frac{1}{2}$	Do. . .	Do.
18	$7\frac{3}{4}$	$16\frac{1}{4}$	(Fezzan sheep) .	British Museum.

DOMESTIC SHEEP (Ovis aries).

Length on outside curve.	Circumference.	Tip to Tip.	Number of Horns.	Owner.
$17\frac{7}{8}+14\frac{1}{8}$	$7\frac{5}{8}+4\frac{3}{4}$	$4\frac{1}{2}+6\frac{3}{4}$	(four horns) . .	Hume Collection, British Museum.
$17+11\frac{3}{4}$	$6\frac{3}{4}+5$	$6+8\frac{1}{2}$	Do. . .	British Museum.
$13\frac{1}{4}+10\frac{7}{8}$	$5\frac{3}{4}+4\frac{1}{2}$	...	(five horns) . .	Hume Collection, British Museum.
$13+9\frac{7}{8}$	$7\frac{5}{8}+5$	$14\frac{3}{4}$	(four horns) . .	A. O. Hume, Private Collection.
$12+9\frac{3}{4}$	$6\frac{1}{2}+4$	$17\frac{1}{4}$	Do. . .	Do.

MUSK OX (Ovibos moschatus).

HEIGHT at shoulder about 48 inches.

Distribution—Arctic regions of North America—north and east of a line drawn from the mouth of the Mackenzie River to Fort Churchill on Hudson Bay. Latitude 60° is generally its southern boundary. Specimens have been recorded as far north as Grinnell Land, latitude 82° 27′.

Length on outside curve	Breadth of Palm.	Tip to Tip.	Habitat.	Owner.
–29¾	13	...	...	W. W. Hart.
27¼	12½	27	North America .	Earl of Lonsdale.
26⅞	11	27	Barren ground of Northern Canada	Warburton Pike.
26¾	12⅜	...	North America .	J. Rae, British Museum.
26¼	13⅛	27⅝	Do. .	British Museum.
24¾	11	25½	Barren ground of Northern Canada	Warburton Pike.
24¼	10½	26	Do.	Hon. Walter Rothschild.
24	20 (circumference)	30	North America .	Earl of Lonsdale.
24	9¾	23⅛	Do. .	Sir Edmund G. Loder, Bart.
22¾	9¼	19¼	Grinnell Land .	Capt. W. H. Fielden, British Museum.
–21½	9	27	...	Dublin Museum.
♀ 18⅝	4¼	...	North America .	A. G. Dallas, British Museum.
♀ 18¼	4⅛	...	Do. .	Do.

CAPE BUFFALO (Bos caffer).

When Mr. Rhodes' pioneers entered Mashonaland in 1890, and found an outlet to the then unexplored and all but unknown region between Umtali and the east coast at Beira, it was discovered that one of the best pieces of buffalo country in all Africa lay there virgin and undisturbed. Along the Pungwe River vast herds of buffalo roamed, as they had roamed for ages, untroubled by the sound of the rifle. Since 1890 a good deal of shooting has been done in this region, but between Beira and the mouths of the Zambesi buffalo are still to be found in great plenty. The country is, however, feverish and unhealthy, and should not be entered except between the end of May and November. In other parts of South Africa the buffalo is now conspicuous by its absence, except on the Cunene, Okavango, Chobe, and Zambesi rivers. On the Upper Zambesi, and thence towards the Central Lake regions, these animals are very abundant. In Cape Colony a few protected herds still find shelter in the dense jungle of the Addo Bush, the Knysna and Zitzikamma Forests, and the Fish and Sunday's River thickets. The rinderpest has played sad havoc with the herds of East Africa and Nyassaland. The buffalo has acquired the reputation—undoubtedly a well-deserved one—of being one of the most dangerous of all beasts of chase to follow when wounded.

HEIGHT at shoulder, 5 feet to 5 feet 6 inches.
Do. 5 „ (Count Felice Scheibler).

Distribution—Portuguese East Africa (Pungwe River District), parts of Mashonaland, Matabeleland; swamps of Okavango, Nyassaland, British and German East Africa, now rather rare.

MEASUREMENTS OF BUFFALO (Capt. R. A. J. Montgomerie, C.B., R.N.)

Shot in British East Africa.

	feet.	inches.
Length from tip of nose to end of tail . .	12	6
,, ,, ,, to root of tail . .	9	4
Height at shoulder	5	0
Circumference of neck near the horns . .	4	3½
,, ,, shoulder . .	6	2
,, the jaws	4	1
,, upper arm	0	22
Girth behind forelegs	8	1
,, of forearm	0	22
,, below knee	0	10½

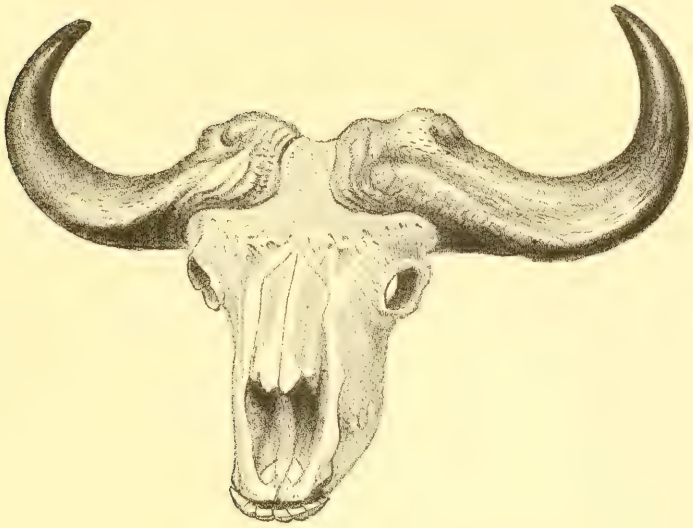
Greatest Width.		Tip to Tip.	Width of Palm measured on face of horn.	Habitat.	Owner.
Outside.	Inside.				
-49½	43⅜	30⅞	12	Sabi River . .	F. H. Barber.
47	41	28½	12	Limpopo . .	W. F. Webb.
47	40⅞	...	12¼	East Africa . .	F. J. Jackson.
...	40½	26	...	Do. . .	Prince Boris Czetwertynski.
46½	44¼	37½	6½	Pungwe River .	C. M. Swire.
45¾	41¼	37⅛	...	South Africa . .	British Museum.
45¾	40	28¾	12	Nyassaland . .	F. V. Kirby.
45½	41	30	...	East Africa . .	W. Astor Chanler.
45½	...	...	11½	Kilima'njaro, East Africa	H. C. V. Hunter.
-45	39¾	36½	14	East Africa . .	Count Felice Scheibler.
-45	...	...	...	Nyassaland . .	S. Pulley.
44¾	39⅝	27½	11¼	East Africa . .	Sir Robert Harvey, Bart.
44½	39¼	29	12	Pungwe River .	F. S. Staples.
44½	...	37½	12	East Africa . .	F. Charrington.
44	39¼	29	14	Near River Ramokwebani, S. Africa	F. C. Selous.
44	40¼	37¾	12	East Africa . .	Capt. R. A. J. Montgomerie, C.B., R.N.
-44	...	...	11½	South Africa . .	J. Lamont.

CAPE BUFFALO (Bos caffer)—*continued.*

Greatest Width.		Tip to Tip.	Width of Palm measured on face of horn.	Habitat.	Owner.
Outside.	Inside.				
43⅝	37¾	26½	12¾	East Africa . .	Hon. Walter Rothschild.
43¼	38¼	24½	13¼	South Africa . .	Sir John Willoughby, Bart.
43	37⅝	29¾	14	East Africa . .	C. D. Rudd.
42¾	38	33⅜	9¾	Do. . .	E. J. L. Berkeley.
42⅜	36¾	29½	12½	...	Sir Victor Brooke's Collection.
42	37⅜	26¼	11	South Africa . .	Capt. F. H. Lehmann.
41½	37¾	34½	10	Pungwe River .	R. H. Venables Kyrke.
41½	36⅞	28	...	South Africa .	British Museum.
41	36¾	37	11	Zambesi .	Comdr. A. T. Hunt, R.N.
41	36	30	11½	...	Rowland Ward.
41	35⅞	28¾	...	Mashonaland . .	F. C. Selous, British Museum.
40½	36¾	25½	9½	Pungwe River .	Marquis of Hamilton.
–40¼	36	20⅜	12	Lower Shiré . .	Surgeon J. Dowson, R.N.
–...	36	21	...	East Africa . .	Sir John Willoughby, Bart.
40	37	35	...	Do. . .	General Lloyd Mathews.
40	35¾	...	14⅝	Do. . .	F. J. Jackson.
♂ 40	34⅜	21	8¼	Pungwe River .	J. W. Allen.
39¾	34½	9½	14	Do. .	G. L. Bonham.
39¼	35	34½	9	Do. .	R. Hughes.
39	36	35¼	12	Zululand . . .	A. J. Brandon.
39	34½	22½	10	Mashonaland . .	A. Neilson.
39	34¼	27	11½	Benguella . .	G. W. Penrice.
39	34	19	10½	Shiré River . .	H. H. Williams.
38¼	32½	19¾	13	...	Sir Edmund G. Loder, Bart.
38	33¼	26½	8	Pungwe River .	A. Cameron.
37¼	33½	32¾	12½	East Africa . .	Sir John Kirk, M.D., K.C.B.
37⅛	31⅞	23⅝	13	...	H.R.H. Duke of Saxe-Coburg and Gotha.

CAPE BUFFALO (Bos caffer)—*continued.*

Greatest width.		Tip to Tip.	Width of Palm measured on face of horn.	Habitat.	Owner.
Outside.	Inside.				
37	32	16¼	9½ (about)	Pungwe River .	Viscount Ennismore.
36	30⅞	25	14½	East Africa . .	A. M. Naylor.
35	33½	27	15 (circum.)	South Africa . .	Dublin Museum.
34½	30½	21⅞	10	Pungwe River .	Ford G. Barclay.
–33½	35	15	27	South Africa . .	Dublin Museum.
–29	30½	14	27	Do. . .	Do.



CENTRAL AFRICAN BUFFALO (Bos centralis).

Mr. E. Gedge says: "By no means as common as *Bos caffer*. The one specimen I obtained was shot near Mount Elgon. I do not remember having seen any south of this point, nor have I met with it in Uganda, though I have seen skulls and horns of animals that have been killed by the natives."

Distribution—Abyssinia, Soudan, South Somaliland.

Greatest Width.		Tip to Tip.	Width of Palm.	Habitat.	Owner.
Outside.	Inside.				
40	37	32	11⅞	Abyssinia . .	E. Lort-Phillips.
39	36½	34½	...	Soudan . . .	Rowland Ward.
36	29	24	...	Mount Elgon, East Africa	E. Gedge.
32	28	22	6⅜	Busé Country . .	The late F. L. James.
31¾	28¼	25⅜	8½	Settite River . .	Col. Ralph Vivian.
31½	26½	21¼	9¼	..	C. P. V. Aylmer and W. D. James.
31⅜	26⅞	24⅜	...	Bogosland, Abyssinia	British Museum.
30½	23	20½	8½	Soudan . . .	Lieut.-Col. the Hon. W. Coke.

Shot by His Highness the Maharajah of Kuch Behar.

ARNEE (Bos bubalus).

HEIGHT at shoulder, adult male, 6 feet $2\frac{1}{2}$ inches; GIRTH behind shoulder, 10 feet 8 inches.

LENGTH from tip of nose to end of tail	14	feet	2	inches.
" " " root "	11	"	0	"
GIRTH near the shoulder . . .	8	"	8	"
" " largest measurement	10	"	8	"
CIRCUMFERENCE of neck near the ears .	5	"	3	"
" " " shoulder	7	"	8	"
HEIGHT at shoulder	6	"	0	"
HORNS round curves inside . . .	9	"	$8\frac{1}{2}$	"
" circumference at base . .	0	"	$22\frac{3}{4}$	"
" tip to tip	0	"	53	"
widest inside	0	"	56	"
WEIGHT of head cut off at throat .			$158\frac{1}{3}$	lbs.
" foot			$16\frac{1}{2}$	lbs.

(H.H. the Maharajah of Kuch Behar.)

A male Buffalo shot and measured by Major-General Alexander A. A. Kinloch was 5 feet at shoulder.

Distribution—Plains of the Brahmaputra and Ganges from the eastern end of Assam to Tirhoot, and the Terai as far west as Rohilcund, the plains near the coast in Midnapore and Orissa, and also the plains in the Eastern Central Provinces (Mandla, Raipur, Sambalpur, Bastar, and other districts) as far south as the Godávarí and Pranhita rivers, and perhaps a little beyond. Abundant in Northern Ceylon, smaller variety (W. T. Blanford).

Length on outside curve.	Circumference at base.	Tip to Tip. Splay.	Widest inside.	Habitat.	Owner.
77⅜	17⅞	...	...	...	British Museum.
– ♀ 70½	18	64 outside	78	Assam . .	J. Campbell of Kilberry.
65¾	20¼	...	...	Do. . .	Col. J. Mathie, British Museum.
– ♀ 64½	18	42½	66 (outside)	Assam . .	J. Campbell of Kilberry.
– ♂ 63	18	...	60 (outside)	Do. . .	Do.
62	17¾	101	...	Do. . .	Hon. Walter Rothschild.
61⅞	15¾	22⅓	45¼	Kuch Behar .	Maharajah of Kuch Behar.
♀ 61½	16	22	48	Assam . .	Hon. Walter Rothschild.
58⅝	12⅜	...	...	...	British Museum.
58½	12¾	...	...	...	Do.
♀ 58	15	46½	59	Assam . .	Rowland Ward.
...	...	42¼	...	...	Bethnal Green Museum.
–57	...	...	...	...	J. D. Inverarity.
57	18½	41½	60	Cent. Provinces	Col. G. D. Sulivan.
–57	15	49	52	Assam . .	A. H. Straker.
♀ 56	19¼ (measured 5 ft. 10 inches at shoulder)	33⅞	50¼	Kuch Behar .	Maharajah of Kuch Behar.
56	15½	55½	58	Do. .	Eyre Coote.
55½	18½	29	44	...	J. Carr Saunders.
– ♀ 55	13½	...	...	Bhutan Terai .	Major-General Alexander A. A. Kinloch.
54½	18⅛	38¼	48⅞	...	Hume Collection, British Museum.
54	18	...	60	...	Viscount Powerscourt.
53⅞	12	...	...	...	A. O. Hume, Private Collection.
...	21	26⅞	...	Kuch Behar .	H.I.M. the Sultan of Turkey.

ARNEE (Bos bubalus)—*continued.*

Length on outside curve.	Circumference at base.	Tip to Tip.	Widest inside.	Habitat.	Owner.
53¼	12⅛	23¼	40⅝	...	Hume Collection, British Museum.
53⅛	12½	...	...	Nepal . .	B. H. Hodgson, British Museum.
♂ 53⅛	23¾ (6 ft. 2½ inches at shoulder)	30	42¼	Kuch Behar .	Maharajah of Kuch Behar.
51¾	18½	22	38¼	Assam . .	Sir Peter Walker, Bart.
50	18½	48½	60	Cent. Provinces	Capt. C. F. Pinney.
50	13¼	33	38½	Assam . .	Noel Fenwick.
–49¾	17¼	16¼	37	Kuch Behar .	Count Felice Scheibler.
48½	18½	33	51	Cent. Provinces	Col. F. C. Lister-Kay.
♀ 47½	13	23	47	India . .	Capt. C. B. Wood.
46	20	42¼	55½	Kuch Behar	His Highness Prince Hans Henry of Pless.
–46	17½	32	41	...	Dublin Museum.
46½	13¾	32	41	Kuch Behar .	J. C. O'Donnell.
46½	20	42½	54	Assam . .	Col. R. Pole Carew.
45¼	13	39	49	Kuch Behar .	Lord Wolverton.
44½	14½	15½	38	Assam . .	L. Truninger.
44	19	27¼	46½	Do. . .	Hon. Stratford Tollemache.
43	16	50	50¾	Nepal . .	H.R.H. Duke of Saxe-Coburg and Gotha.
♀ 35	9½	31¾	37¼	Ceylon . .	Count R. Wahrmann.
34¼	15¼	25⅜	35	Do. . .	Earl Cairns.
♀ 33¼	9	31½	37	Do. . .	Do.
31½	16	47¼	...	South Australia	H. L. Heber-Percy.
30¾	14	22	32	Ceylon . .	H. E. Lindsay.
30¾	14	28	33¾	Do. . .	Count J. Potocki.
29¼	10½	26	32	Do. . .	Capt. J. Fuller.
26⅜	14¾	28⅛	25	Formosa . .	R. Swinhoe, British Museum.

AMERICAN BISON (Bos americanus).

HEIGHT at shoulder, 6 feet. WEIGHT, about 15 to 20 cwt. Adult bull weighed by Hornaday 1727 lbs.

Distribution—Now nearly extinct, perhaps a few still remaining in the regions of the Great Slave Lake.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
20⅞	15	...	30½	Wyoming .	Hon. F. Thellusson.
–19	12½	...	...	W. Montana .	P. Liebinger.
18⅞	14¾	...	16⅞	Do. .	The late J. S. Jameson.
–18¼	14	26¼	29	Sioux Country .	Sir Greville Smyth, Bart.
–18	14	...	...	Montana . .	F. Sauter.
17¾	12⅜	15⅛	...	...	H.R.H. Duke of Saxe-Coburg and Gotha.
17½	12½	...	...	S.W. Montana	Theodore Roosevelt.
17½	12	...	25½	Wyoming .	Rowland Ward.
17⅛	11⅜	10⅜	17½	...	British Museum.
16⅝	14¼	24	...	Bighorn Mts., Wyoming	Moreton Frewen.
16½	12½	19⅜	Hill Buffalo	...	Sir Edmund G. Loder, Bart.
16⅛	15⅞	25¾	...	Plains, Colorado	Do.
15½	14⅜	...	19¾	Wyoming .	St. George Littledale.
14	...	12¼	...	North Park, Colorado	Col. Ralph Vivian.
13½	13½	17½	...	...	G. Wrey.
13⅜	12	...	...	...	Hon. Walter Rothschild.

After Forsyth.

GAUR BISON (Bos gaurus).

HEIGHT at shoulder, 6 feet 4 inches (Viscount Powerscourt).
Do. 6 feet 3½ inches (H.H. the Maharajah of Kuch Behar).

Major-General Rice records dimensions of fine bull shot at Mundoorlee in the "Dandille Jungles" in 1870:—

	ft.	in.		ft.	in.
Height from shoulder to toe	6	2	Round neck at widest	7	0
Length—nose to tip of tail	12	10	,, forearm at widest	2	1½
Girth at widest over hump	9	4	,, hind-leg at widest	2	11
From nose, between horns, or length of head altogether	2	3	,, hock	1	9

Bull shot on the 30th October 1893 on the Syhadris or Western Ghauts bordering on Sáwant Wadi, Bombay Presidency. Measurements very carefully taken :—

	ft.	in.
Height at shoulder between uprights	6	1
,, dorsal ridge, highest point	6	6
Length from tip of nose to insertion of tail between uprights	9	2
Length of tail	2	9½
Girth of body behind shoulders	8	4½
,, foreleg above knee	1	4⅛
,, at middle neck	3	10½
,, of foreleg at elbow	2	8½
Breadth of forehead	1	2

	ft.	in.
Horn measurements (outside curve), right horn	2	8½
Do. left horn	2	5¾
Greatest width across sweep of horns	3	4
From tip to tip of horns along inside curve and across forehead	5	1
Between tips	2	3
Weight of right horns 6½ lbs. Weight of left horns 6¼ lbs. (Lieut.-Col. L. L. Fenton.)		

Measurements of a solitary bull bison killed by Mr. A. T. Mackenzie, on the North Travancore Hills, some 3 miles from the Periyar Dam :—

	ft.	in.
Vertical height from toe to dorsal ridge	6	0½
Length in a straight line from frontal bone to root of tail	7	10¾
Length of tail	2	11½
Face, from frontal bone to end of nose	2	1¼
Girth behind shoulder	8	8¼
,, of foreleg below elbow	2	1¼
Smallest girth below knee	0	11½
Length of foreleg outside body	2	5½

	ft.	in.
Greatest width across from outside to outside	3	1½
Left horn round outside curve	2	2½
,, ,, inside curve	1	10½
,, ,, base, clear of hair	1	5¾
Right horn round outside curve	2	3¼
,, ,, inside curve	1	11½
,, ,, base	1	6½
Tip to tip, round curve and across forehead	6	5¾
Tip to tip, straight	1	10½

These measurements were taken with a new Chesterman's 50-inch tape (checked and found correct) between verticals carefully plumbed. This bison was in the prime of health and condition, with horns hardly at all worn.

A male gaur shot by Major-General Alexander A. A. Kinloch, and measured by him, was 5 feet 5 inches at shoulder.

Distribution—All the great hilly forest-tracts of the Indian Peninsula, Assam, Burma, and the Malay Peninsula, in the forests at the foot of the Himalayas as far west as Nepal. South of the Ganges it exists in suitable tracts in Chutra, Nagpur, Orissa, and the Northern Cercars, the Central Provinces, Hyderabad territories, Mysore, and throughout the Western Ghauts, wherever it has not been exterminated (W. T. Blanford).

GAUR BISON (Bos gaurus)—*continued.*

Length on outside curve of longest horn.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
–39	19¼	...	...	...	G. Beck.
34¾ *	20	25	40½ (outside)	Vardi Mullay	Baron von Massow.
33¾	17¼	24	...	...	J. D. Goldingham, Bethnal Green Museum.
33½	18½	38	...	Mysore . .	Viscount Powerscourt.
33½	18½	25	33¼	Travancore .	T. W. Greenfield.
33⅛	18	23½	34½	Kuch Behar .	Maharajah of Kuch Behar.
33	17½	20½	32¼	...	P. Z. Cox.
32½	...	27	...	Western Ghauts	Lieut.-Col. L. L. Fenton.
31⅞	17⅛	21⅜	32½	...	A. O. Hume, Private Collection.
31½	18	29	43 (outside)	...	Bombay Nat. Hist. Soc. ("Proceedings").
–31½	17	21	32¼	...	Dublin Museum.
31¼	16⅜	12⅝	27½	...	J. D. Goldingham, Bethnal Green Museum.
30½	19½	16	35 (outside)	Travancore .	Lord Douglas Compton, A.D.C.
30¼	18½	22½	37¼	Do. .	A. T. Mackenzie.
30 (height at shoulder)	19¼ 70½	11	32⅛	Kuch Behar .	Maharajah of Kuch Behar.
–30	16	38 (inside)	41 (outside)	Central Provinces	Surg.-Maj. J. W. H. Flanagan.
–30	20	15½	33	...	G. Beck.
29⅞	18¼	30	34	. .	Sir Edmund G. Loder, Bart.
29¾	18⅝	25¼	30⅜	Hassanoor Hills, S. India	Sir V. Brooke's Collection. (Shot by Col. D. Hamilton.)
–29½	19¼	16¼	26½	Narbada Valley	Maj.-Gen. Alexander A. A. Kinloch.
–29½	18	...	33 (outside)	India . .	J. D. Inverarity.
29¼	12⅞	...	18	Do. . .	Gen. Hardwicke, Brit. Museum.
29⅛	16⅝	20⅜	29¼	Nepal . .	B. H. Hodgson, British Museum.
–29	22	...	...	...	Otho Shaw.
29	17½	...	35	North Kanara	Lieut.-Col. L. L. Fenton.
28¾	18½	14¼	30	Travancore .	Lord Wenlock, G.C.I.E.

* Recorded by J. van Ingpen in the *Asian.*

GAUR BISON (Bos gaurus)—*continued.*

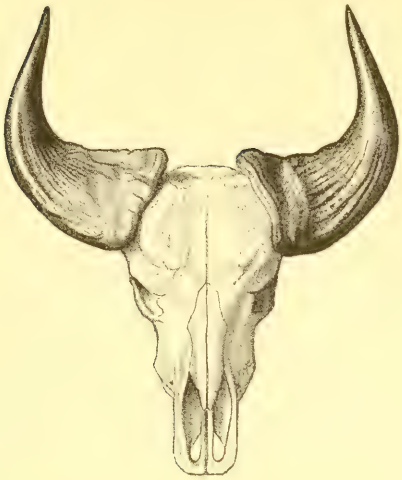
Length on outside curve of longest horn.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
28¾	17¼	23¼	31	South India .	H. M'Micking.
28½	15¾	18⅝	28⅝	...	Maj.-Gen. Sir Arthur Ellis, C.S.I.
28½	15¼	17	27	...	Hume Collection, British Museum.
28½	18	15¾	33½	Travancore .	H. L. Cottingham.
28	18	22½	34¾	Assam . .	Hon. Stratford Tollemache.
28	16	10¼	24	Central Provinces	Martyn Kennard.
27⅞	17¼	32¼	32¾	Do.	Maj. C. S. Cumberland.
27¾	19¼	37	41	Kalkerray, S. India	Capt. W. B. Fairholme.
27¾	18¾	24⅜	30½	...	Capt. G. A. L. Carew.
27½	17	26¼	36	Assam . .	L. Truninger.
–27½	20½	26¼	36½ (outside)	...	Major-General Rice.
–27¼	17	...	...	Madras . .	Major J. W. M. Cotton.
27	16	16	...	...	Rowland Ward.
–27	15	...	...	Panarel, Central India	Capt. A. Hicks-Beach.
–27	16¾	22	30½	South India .	H. W. Murray.
26⅞	15⅞	16¼	27	...	Hon. Walter Rothschild.
26½	15½	16	...	South India .	Rowland Ward.
26¾	14⅞	13⅞	24¼	Sahaydri Mts., South India	Capt. W. Thompson, British Museum.
26	18½	23⅜	32¾	Central Provinces	G. de H. Smith.
26	17¼	19⅜	...	...	Lord Wolverton.
26	10	16½	32½	Central Provinces	Capt. C. F. Pinney.
26	15	26¼	36	Do.	Capt. J. Fuller.
26	16½	21	26¾	Do.	E. Litchfield.
24⅜	16	11½	27¼	...	Lord Manners.
–24	18	34	38½	...	J. D. Inverarity.
21⅞	11½	7⅝	18	Western Ghauts	Capt. W. Thompson, British Museum.
20½	10½	12	...	Madras . .	Major J. W. M. Cotton.

GAYAL (Bos frontalis).

These horns are not so fine as *Bos gaurus*, and have the points much more divergent.

Distribution—Assam and Chittagong Districts.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
15	$11\frac{1}{2}$	$26\frac{3}{8}$	North India . .	British Museum.
$12\frac{5}{8}$	$13\frac{1}{4}$	$27\frac{3}{4}$	...	Do.



DWARF BUFFALO (Bos nanus).

HEIGHT at the shoulder, female, about 42 inches.

Distribution—Western Equatorial, and the northern parts of Central Africa.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–21⅜	15¾	4	Niger	C. A. Wilding.
21⅛	12¾	2¼	West Africa . .	British Museum.
18¼	10¾	5½	Central Africa . .	Colonel Denham and Colonel Clapperton, British Museum.
♀ 17	11⅜	6¾	Do. . .	Do.
15¾	11	9¼	...	Sir Edmund G. Loder, Bart.
15	6½ (width of palm)	14	Niger Territory . .	A. J. Arnold.
14⅝	8⅛	7⅛	Sette Cama, West Africa	British Museum.
–14¾	11¼	8¾	Gaboon . . .	Dr. Percy Rendall.
14¼	12¼	10⅝	...	Sir Victor Brooke's Collection.
13⅞	10¼	28½	Gambia . . .	Earl of Derby, British Museum.
9½	7¾	8½	West Africa . .	Hon. Walter Rothschild.

ZEBU (Bos indicus).

Distribution—India.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
$17\frac{1}{8}$	$10\frac{3}{4}$	$25\frac{1}{2}$	. .	British Museum.

YAK (Bos grunniens).

WEIGHT about 1140 lbs. HEIGHT at shoulder about 5½ feet. GIRTH round chest behind shoulder, 9 feet 1½ inches. LENGTH: between horns to root of tail, 8 feet 0½ inch; tail, 3 feet 2½ inches; horns to nose, 1 foot 3½ inches (Lieut. H. M. Biddulph).

A male Yak, measured and shot by Major-General Alexander A. A. Kinloch, was 4 feet 10 inches at shoulder.

Distribution—The plateau of Tibet, part of the Kansu province of China, and Northern Ladak (W. T. Blanford).

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
38¼	17	19	31½	...	Hume Collection, British Museum.
35¼	14½	17	25½	Tibet . . .	St. George Littledale.
34	12	20½	...	Ladak . . .	Hon. Walter Rothschild.
–32¾	16¼	27½ (spread 18¾)	26⅜	Do. . . .	Lieut. H. M. Biddulph.
32	13⅞	15¼	22¼	Do. . . .	H. C. V. Hunter.
–31⅞	14¼	18¼	...	Chancheimo . .	P. H. G. Powell-Cotton.
31	14	...	...	Do. . .	Col. F. C. Lister-Kay.

YAK (Bos grunniens)—*continued.*

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
30¾	13½	10½	...	Chancheimo . .	Sir Robert Harvey, Bart.
29¾	14	12	25⅛	...	Hume Collection, British Museum.
29½	13½	11	...	Chancheimo . .	Colonel G. D. Sulivan.
–28	16	17⅞	26⅜	India . . .	Major-General Alexander A. A. Kinloch.
27⅞	11¾	18⅜	27⅜	Nepal . . .	B. H. Hodgson, British Museum.
27	13	15¼	23½	Ladak . . .	Major C. S. Cumberland.
26½	13½	19	22¾	Chancheimo . .	Col. J. Biddulph.
25¾	12	16¾	24⅝	Ladak . . .	Major J. A. Orr-Ewing.
24½	11¼	14	23⅛	Chinese Tibet . .	T. W. Greenfield.

THE BANTING or JAVA OX (Bos sondaicus).

HEIGHT at shoulder, good bull, about 5 feet 9 inches.

Distribution—Throughout Burma and the Malay Peninsula; also in islands of Borneo, Java, and Bali (W. T. Blanford).

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
–30	17	...	...	Java . . .	Indian Museum.
–28½	15	26¼	36¾	Do. . . .	H. Van-Son.
25¾	16⅝	20⅞	26¾	Malay Peninsula .	H. C. V. Hunter.
24¾	12¼	15¾	24¼	Java . . .	British Museum.
21⅜	12¼	13⅛	19¼	Borneo . . .	H. B. Low, British Museum.
20⅝	12¼	18⅛	22⅛	Do. . . .	Do.
19	11⅝	18	21⅜	Java . . .	The late H. J. H. Platt.
17⅝	10⅜	7⅛	14¼	British North Borneo	W. Pryer, British Museum.
17½	10⅛	17¼	20¾	Siam . . .	H. C. V. Hunter.
16½	10¾	9½	13⅜	Sarawak . . .	British Museum.
♀ 7¼	7¼	6¾	...	Java . . .	The late H. J. H. Platt.

Shot by St. George Littledale.

THE EUROPEAN BISON or AUROCHS (Bos urus).

Measurements of Mr. St. George Littledale's bull as recorded by him on the field :—

	feet.	inches.
From nose to root of tail	10	1
„ top of hoof to top of withers . .	5	11
Girth of body (uncertain)	8	4

Distribution—Lithuania.

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
18¼	12⅛	13¾	19¼	Lithuania . .	British Museum. (Presented by the Emperor of Russia.)
–18	12⅛	16	20	Caucasus . .	St. George Littledale.
♂ 17½	10	18½	...	Biolvitskia, Lithuania	Major Algernon Heber-Percy.
♀ 15¼	8	6	...	...	R. J. Heber-Percy.
♀ 13	8¼	9¾	14	Caucasus . .	St. George Littledale.

DOMESTIC OX (Bos taurus).

Length on outside curve.	Circumference.	Tip to Tip.	Widest inside.	Habitat.	Owner.
$81\frac{1}{4}+78\frac{1}{2}$	$18\frac{1}{4}$	$103\frac{1}{2}$	...	Lake Ngami . .	The late W. C. Oswell.
57 + 56	$19\frac{1}{2}$	82	124	Bechuanaland . .	Sir Edmund G. Loder, Bart.
47	$15\frac{5}{8}$	$21\frac{1}{8}$	...	Abyssinia (Galla Ox)	H. Salt, British Museum.
44	$12\frac{7}{8}$	$70\frac{1}{2}$ (about)	...	...	British Museum.
$42\frac{1}{8}$	$23\frac{5}{8}$	$22\frac{1}{8}$	...	Central Africa . .	Col. Denham, British Museum.
$41\frac{3}{4}$	14	$52\frac{3}{4}$	...	Madagascar . .	Bethnal Green Museum.
$40\frac{1}{4}$	$12\frac{1}{4}$	$60\frac{7}{8}$	...	Vienna (Polish Bull)	British Museum.
$38\frac{1}{2}$	$10\frac{1}{2}$	$54\frac{3}{4}$	...	Italy . . .	Bethnal Green Museum.
$35\frac{3}{4}$	$12\frac{3}{4}$	$59\frac{1}{2}$	...	Cape of Good Hope	Do.
$30\frac{1}{8}$	$12\frac{3}{8}$	35	...	Spain . . .	Do.
$29\frac{3}{8}$	$11\frac{1}{8}$	$28\frac{7}{8}$	...	Gambia . . .	Earl of Derby, British Museum.
$18\frac{1}{2}$	$10\frac{3}{8}$	20	$21\frac{1}{8}$	Chillingham Park .	Earl of Tankerville, British Museum.
♀ $18\frac{1}{4}$	7	$10\frac{1}{8}$	$15\frac{3}{8}$	Do.	Do.
$17\frac{1}{2}$	$10\frac{3}{8}$	$30\frac{1}{2}$	...	Buenos Ayres (Niata Cattle)	G. Claraz, British Museum.
$17\frac{1}{4}$	$10\frac{1}{4}$	$25\frac{1}{8}$	...	Gambia . . .	Earl of Derby, British Museum.
$15\frac{1}{4}$	$9\frac{5}{8}$	$17\frac{3}{8}$	$18\frac{1}{8}$	Northumberland .	Duke of Hamilton, British Museum.
$12\frac{1}{8}$	8	$16\frac{1}{8}$	...	Angola, West Africa	Sir Victor Brooke's Collection.
$11\frac{1}{2}$	$7\frac{1}{2}$	(single horn)	...	Nepal . . .	B. H. Hodgson, British Museum.

Drawn from life.

ANOA (Anoa depressicornis).

Distribution—Celebes.

Length on outside curve.	Circumference.	Tip to Tip.	Habitat.	Owner.
–15⅜	7⅛	7½	Celebes . . .	Paris Museum.
12⅜	6	6½	Do. . . .	British Museum.
12¼	6¼	8¾	Do. . . .	Do.
11½	5¾	7¼	Do. . . .	Gen. Hardwicke, British Museum.
10	5⅞	5⅝	Do. . . .	Sir Victor Brooke's Collection.
–9½	8½	8½	Do. . . .	Dublin Museum.
8⅞	4⅜	4¾	Do. . . .	Sir Edmund G. Loder, Bart.

Indian Rhinoceros (Rhinoceros unicornis)
from Kuch Behar

THE GREAT ONE-HORNED INDIAN RHINOCEROS
(Rhinoceros unicornis).

HEIGHT at shoulder of male measured and shot by Major-General Alexander A. A. Kinloch, 5 feet 8 inches.

HEIGHT, 6 feet. GIRTH, 105 inches. LENGTH, 12 feet 10 inches; body, 11 feet (His Highness the Maharajah of Kuch Behar).

Distribution—Almost restricted to the Assam Plain (W. T. Blanford).

Length on front curve.	Circumference.	Weight.	Habitat.	Owner.
–24	...	...	...	T. C. Jerdon.
$19\frac{1}{8}$	$22\frac{3}{8}$	...	India . . .	British Museum.
$16\frac{3}{4}$	...	...	Belsire, Assam .	T. Briscoe.
♀ 16	...	$3\frac{1}{2}$ lbs.	Nowgong, Assam	L. Fabre Tonnerre.
$14\frac{1}{4}$	21	...	Assam . .	Dr. W. P. Y. Bainbrigge.

THE GREAT ONE-HORNED INDIAN RHINOCEROS
(Rhinoceros unicornis)—*continued.*

Length on front curve.	Circumference.	Weight.	Habitat.	Owner.
♂ 14	$22\frac{7}{8}$	$4\frac{1}{2}$ lbs.	Nowgong, Assam .	L. Fabre Tonnerre.
13	...	...	Kuch Behar . .	Maharajah of Kuch Behar.
$12\frac{3}{4}$	23	...	Assam . .	H. B. Firman.
$12\frac{1}{2}$	$21\frac{5}{8}$	...	Do. . .	H. C. Holland.
11	20	...	Kuch Behar .	Capt. the Hon. W. Lambton.
$8\frac{1}{2}$	15	...	Assam . .	Sir Peter Walker, Bart.
$8\frac{1}{4}$	$14\frac{7}{8}$	...	Do. . .	Hugh Barclay.
$5\frac{1}{2}$	$14\frac{1}{2}$	...	Kuch Behar .	Capt. Henry Streatfeild.

THE SMALLER ONE-HORNED RHINOCEROS (Rhinoceros sondaicus).

Distribution—The Sundarbans and parts of Eastern Bengal, Sikim, and Terai. From Assam, throughout Burma and the Malay Peninsula, and in Sumatra, Java, and Borneo (W. T. Blanford).

Length on front curve.	Circumference.	Habitat.	Owner.
$10\frac{5}{8}$	$19\frac{5}{8}$	Java . . .	British Museum.
$8\frac{1}{4}$	20	Do. . . .	A. S. Campbell.

SUMATRAN RHINOCEROS (Rhinoceros sumatrensis).

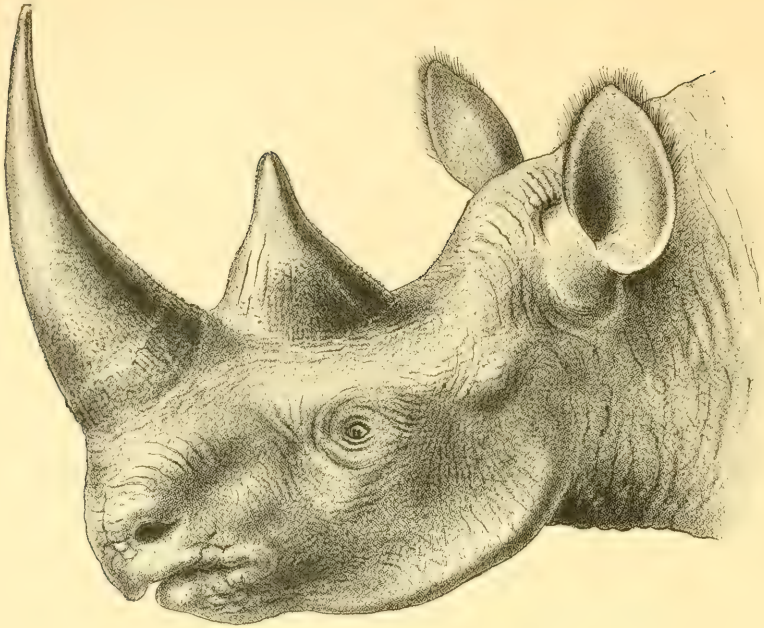
The Asiatic Two-horned Rhinoceros, the smallest of living Rhinoceros.

HEIGHT at shoulder about 4 feet to 4 feet 6 inches.

WEIGHT about 2000 lbs.

Distribution—From Assam (very rare) the species ranges to Siam, the Malay Peninsula, Sumatra, and Borneo (W. T. Blanford).

Length on front curve.	Circumference.	Habitat.	Owner.
$32\frac{1}{8}$	$17\frac{3}{8}$	...	British Museum.
$27\frac{1}{8}$	$17\frac{7}{8}$	...	Do.



AFRICAN RHINOCEROS (Rhinoceros bicornis).

Swahili Name—"Javu." *Somali Name*—"Weel."

In many parts of the Dark Continent the Black Rhinoceros is still abundant, although, like most of the other large mammals, it is now difficult to find south of the Zambesi. The rough and difficult country between the Victoria Falls and the Zambesi mouth is perhaps the likeliest place to find *Rhinoceros bicornis* at the present day in the south of the Continent. The interior of Somaliland, the country between that territory and Lake Rudolph, and the adjacent regions, probably hold more black rhinoceros at the present day than any other part of Africa. This rhinoceros is not a difficult beast to kill, and although more active, more alert, and therefore more dangerous than its huge cousin, *R. simus*, hunters, since the introduction of arms of precision, have found little difficulty in accomplishing its downfall. Forty years ago, in South Africa, English and Dutch hunters often killed half a dozen of these animals to their own rifle in a night's shooting at a desert pool or water-pit.

HEIGHT at shoulder of biggest bull, 5 feet 8 inches.
" " cow, 5 feet 2 inches. } (F. C. Selous)

ESTIMATED WEIGHT, 1200 lbs. (Capt. F. D. Lugard).

LENGTH, from tip of nose to end of tail, 13 feet 4 inches.
" " " to root of tail, 4 feet 1 inch.

HEIGHT at shoulder, 5 feet 6 inches. Circumference of neck, 4 feet $9\frac{1}{2}$ inches. Circumference of jaws, 4 feet 4 inches. Girth of body, 8 feet 7 inches.

Shot on the Athi Plains, East Africa, by Count Felice Scheibler.

MEASUREMENT of East African *Rhinoceros bicornis* skull from back to front $26\frac{3}{8} + 14\frac{7}{8}$ (Capt. R. A. J. Montgomerie, C.B., R.N.).

Distribution—South of the Zambesi, limited to hilly and broken country along that river east of the Victoria Falls. Sparsely in North-Eastern Mashonaland, Matabeleland, and in the low-lying country on the east coast, about Sofala Bay. Plentiful in British and German East Africa; also Southern Somaliland, and Abyssinia.

Length.		Circumference.		Habitat.	Owner.
On front curve.	Rear Horn.	Front Horn.	Rear Horn.		
$41\frac{1}{2}$	10	$20\frac{1}{2}$	$16\frac{1}{2}$	Zululand . .	Lieut.-Col. the Hon. W. Coke.
–41	...	...	...	...	Carl Hagenbeck.
41	...	...	...	...	F. Holmwood.
–40	...	22	...	East Africa . .	Berlin Museum.
40	$14\frac{3}{4}$	$18\frac{1}{2}$	$20\frac{1}{4}$	East Central Africa	A. H. Neumann.
$-39\frac{1}{8}$	...	$21\frac{1}{2}$	...	South Africa .	J. Lamont.
$38\frac{3}{4}$	...	21	...	...	Hon. Walter Rothschild.
$38\frac{1}{2}$	...	19	...	Masailand . .	Sir John Kirk, M.D., K.C.B.
–38	11	24	$21\frac{3}{4}$	South Africa .	Earl of Dartmouth.
$-35\frac{1}{2}$	...	18	...	...	H. Murray.
♀ $33\frac{1}{2}$	...	$17\frac{1}{2}$	...	Matabeleland .	W. Van Ness.
$32\frac{1}{2}$	19	21	$15\frac{1}{8}$	North of Zambesi .	F. V. Kirby.
–32	$11\frac{3}{4}$	$19\frac{7}{8}$	$19\frac{1}{2}$	Athi Plains, East Africa	Count Felice Scheibler.

AFRICAN RHINOCEROS (Rhinoceros bicornis)—*continued.*

Length.		Circumference.		Habitat.	Owner.
On front curve.	Rear Horn.	Front Horn.	Rear Horn.		
31	...	18	...	East Africa . .	R. P. Carroll.
31	19½	16	16⅛	Do. . .	H. C. V. Hunter.
30½	...	21¼	...	Zambesi Valley .	Sir John Kirk, M.D., K.C.B.
–29½	14½	...	...	Somaliland . .	A. H. Straker.
29	...	19	...	East Africa . .	H.H. Prince Boris Czetwertynski.
28½	...	18	...	South Africa .	C. D. Rudd.
28¼	8¾	18⅛	...	Do. .	F. C. Selous.
–27½	12	...	...	Lake Njire . .	T. E. Buckley.
27¼	10	21	17	Masailand . .	Capt. R. A. J. Montgomerie, C.B., R.N.
27	...	20½	...	East Africa . .	E. Gedge.
27	16½	17⅞	17½	Do. . .	Sir Robert Harvey, Bart.
27	12	...	...	Do. . .	Sir John Willoughby, Bart.
26¼	17	...	...	Do. . .	The late Major R. Owen.
25⅜	9⅛	17⅜	...	Do. . .	F. J. Jackson.
♀ 24½	12	16	17½	Masailand . .	Capt. R. A. J. Montgomerie, C.B., R.N.
–23	...	...	...	Nile District .	The late Sir Samuel Baker, Bart.
22¾	...	19¼	...	East Africa . .	W. Astor Chanler.
22¼	10	22¾	19	Somaliland . .	Sir Henry D. Tichborne, Bart.
21¾	11⅜	19	19	Do. . .	J. Kenneth Foster.
21⅜	17	14	16	Abyssinia . .	British Museum.
20	11½	21½	18	Somaliland . .	J. Byng-Paget.
20	6¾	20½	19½	East Africa . .	Capt. H. G. C. Swayne.
–19¼	18⅛	8½	17½	Sabi Flats . .	Dr. Percy Rendall.
18¾	10½	18½	16½	Somaliland . .	A. Trevor.
18½	7	22	20½	Bungo . . .	P. H. G. Powell-Cotton.
18	12	20	18	South Africa .	Durban Museum.
17½	7¾	19¼	19⅞	Abyssinia . .	British Museum.

AFRICAN RHINOCEROS (Rhinoceros bicornis)—*continued.*

Length.		Circumference.		Habitat.	Owner.
On front curve.	Rear Horn.	Front Horn	Rear Horn.		
$17\frac{1}{2}$	$9\frac{3}{4}$	20	$17\frac{1}{2}$	Somaliland . .	Prince Nicolas Ghika.
17	$6\frac{1}{2}$	21	17	Do. . .	Prince Demeter Ghika.
$16\frac{3}{4}$	...	$15\frac{7}{8}$	...	Soudan . .	Col. Ralph Vivian.
$16\frac{1}{2}$	$7\frac{1}{2}$	$17\frac{1}{4}$	$15\frac{1}{2}$	Somaliland . .	C. V. A. Peel.
$16\frac{3}{8}$	$12\frac{5}{8}$	$13\frac{3}{4}$	$14\frac{3}{4}$	Abyssinia . .	W. Jessel, British Museum.
$11\frac{1}{2}$	$5\frac{1}{4}$	$16\frac{1}{2}$	$15\frac{3}{4}$	Somaliland . .	Col. A. Paget.
10	6+3	(3 horns)	...	East Africa . .	Sir John Willoughby, Bart.

From a Photograph by Mr. Eales, Reading.
Skull of White Rhinoceros, Mashonaland, 1880.

WHITE RHINOCEROS (Rhinoceros simus).

Thanks to the fatuous and short-sighted persecution of all South African hunters, black, white, and off-coloured, the White Rhinoceros

may now be looked upon practically as an extinct creature. You may exterminate in a hundred years a species like this, but you can by no sort of possibility ever again restore it. That is the sad part of the destruction of so many rare and beautiful animals. Except, perhaps, in North-East Mashonaland, where a solitary survivor or two may still possibly linger, or in the vast reed-beds at the junction of the Black and White Umvolosi Rivers in Zululand, where Mr. Varndell and others have of late procured some of the last survivors, the White Rhinoceros exists no longer. Thanks to the exertions of Mr. Coryndon and Mr. Varndell, complete examples of this enormous mammal have been rescued during the last year or two for the benefit of future ages. Before that time no complete adult specimen had ever reached Europe. Fifty years ago and less this Rhinoceros was extremely common between the Zambesi and the Orange Rivers. Oswell and Vardon slew eighty-nine rhinos—black and white—during one season's hunting. C. J. Andersson killed sixty within a few months. Other hunters were equally busy. And so the White Rhinoceros, the largest of all terrestrial mammals, after the elephant, has perished.

HEIGHT at shoulder of the Hon. Walter Rothschild's specimen, when mounted, 6 feet 2 inches. LENGTH over all from nose to root of tail, between two uprights, as mounted, 12 feet 1 inch.

The *Rhinoceros simus* * skull, Cape Town Museum, measures 30½ inches long, 12½ inches wide. WEIGHT, 60 lbs. (clean).

Distribution—Zululand and parts of Eastern Mashonaland, almost extinct.

Length.		Circumference.		Habitat.	Owner.
Front Horn.	Rear Horn.	Front Horn.	Rear Horn.		
56½	...	23½ (about)	...	...	British Museum.
44	...	20	...	...	Do.
44	...	...	...	East Africa . .	F. Holmwood.
42¾	...	25⅝	...	Limpopo, South Africa	The late W. C. Oswell.
-41	...	...	...	South Africa .	J. W. Fitzherbert.
40¾	...	29¾	...	Do. . .	Sir Edmund G. Loder, Bart.
40	...	15¾	...	...	British Museum.

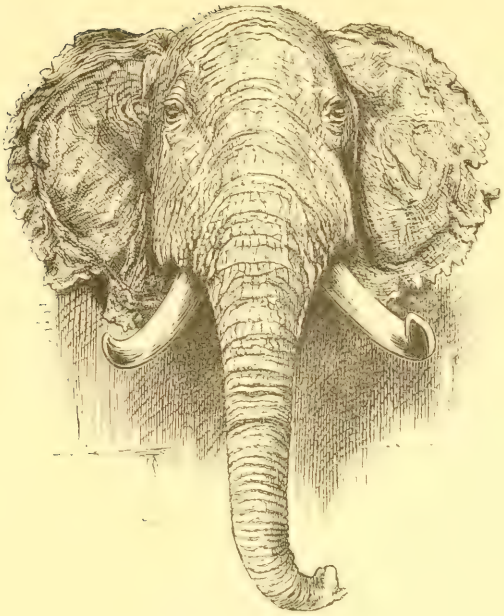
* This belongs to the mounted specimen, see page 290.

SQUARE MOUTHED or WHITE RHINOCEROS

(Rhinoceros simus)—*continued.*

Length.		Circumference.		Habitat.	Owner.
Front Horn.	Rear Horn.	Front Horn.	Rear Horn.		
♀ 38⅝	...	24½	...	...	The late W. C. Oswell.
37⅜	17⅞	27⅛	...	South Africa .	F. C. Selous.
37¼	...	24	...	...	British Museum.
–36¾	...	20½	...	Nyanza . .	Berlin Museum.
36	...	28½	...	Mashonaland .	C. D. Rudd.
36	...	25 (lbs.)	...	...	Rev. V. R. Carter.
35½ (mounted specimen)	7⅝	26	21	Mount Domo, Mashonaland	Cape Town Museum.
33	13⅛	23¼	...	...	F. C. Selous.
32¾	...	27½	...	...	The late J. S. Jameson.
♂ 32¾	...	27	...	Lake Ngami .	The late W. C. Oswell.
31	...	24	...	Zululand . .	Lieut.-Col. the Hon. W. Coke.
♀ 29¾	5½	23	20½	Do. . .	C. H. Varndell.
27	...	20½	...	...	Dr. W. P. Y. Bainbrigge.
22½ (mounted specimen)	7½	26¼	..	Mashonaland .	Hon. Walter Rothschild.
20¾ (mounted specimen)	7	28¾	...	Do. .	British Museum.

The specimen recorded from East Africa (44 inches) belonging to Mr. F. Holmwood may belong to another species. For many years such horns have frequently come under my notice, and I had hoped that some sportsman would have been lucky enough to secure a skull and skin, on which to base a description. I am inclined to think it belongs to a Single horned Rhinoceros.



African Elephant Head.

ELEPHANT (E. africanus).
Do. (E. indicus).

Swahili Name—"Temba." *Indian Name*—"Hathi."
Chinyanza Name—"Njobvu.

The African Elephant, although still abundant in many regions of Central Africa, is in the southern part of the Continent rapidly approaching extinction. A very remarkable exception to this melancholy process of extermination is, however, to be found in the south and east of Cape Colony, where, since the year 1830, wild elephants have been systematically preserved by Government. Strong troops of these protected elephants still roam the dense and impenetrable jungles of the Addo Bush and the Knysna and Zitzikamma forests. A permit to shoot one of these elephants—costing £20—is to be obtained at Cape Town. Farther inland the ivory hunters have for a generation past been so actively employed, that, despite the vast numbers of these great mammals which forty or fifty years since thronged the interior from the Orange River northwards, but a few troops are now left south of the Zambesi. In all Khama's Country of Bamangwato, for instance,

where Gordon Cumming, Oswell, and others shot most of their elephants, but one solitary troop remains!

The largest Indian Elephant ever killed by the late Col. G. P. Sanderson—Vertical Height at shoulder, 9 feet 7 inches; Length from tip of trunk to tip of tail, 26 feet $2\frac{1}{2}$ inches; tusks protruding from gum, 2 feet $4\frac{1}{2}$ inches; tusks when taken out, 5 feet; tusk circumference at gum, 1 foot $4\frac{1}{2}$ inches; tusk, weight of each, $37\frac{1}{2}$ lbs.

Dimensions of Indian Elephants at Zoological Society's Gardens (*P.Z.S.* 1879 and 1881).

	Height at Shoulder.				Circumference of Front Feet above the Toes.				Weight.							
	1879.		1881.		1879.		1881.		1879.				1881.			
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	tons	cwt.	qrs.	lbs.	tons	cwts.	qrs.	lbs.
Jung Pacha .	7	0	8	0	3	8	4	0	2	3	0	23	2	17	1	23
Suffa Culli .	6	10	7	6	3	8	3	9	2	2	3	11	2	11	0	23
Rustom .	6	0	6	4	2	11	3	2	1	3	3	26	1	6	0	0
Omar . .	6	2	7	0	3	2	3	6	1	7	1	5	1	15	1	21

Ceylon Elephant (*Elephas indicus*).

	ft.	in.		ft.	in.
Height at shoulder	9	4	Length of trunk	6	5
Circumference of front foot above the toes	4	5	Circumference of neck . . .	11	3
Circumference of trunk near the mouth	4	2	Do. jaws . . .	12	2

No tusks.
Shot by Count Felice Scheibler.

Major-General Alexander A. A. Kinloch shot a fine tuskless Indian male which measured exactly 10 feet 1 inch at shoulder; circumference of forefoot was $60\frac{1}{2}$ inches.

African Elephant (*Elephas africanus*).

	ft.	in.		ft.	in.
Height at shoulder	8	0	Circumference of the trunk near tusks	3	0
Circumference of the neck without the skin	8	0	Circumference of the front foot near toes	3	$8\frac{1}{2}$
Circumference of the jaws without the skin	9	6	Length of ear	4	$2\frac{1}{8}$

Old cow shot in Somaliland by Count Felice Scheibler.

Height of African Elephant at shoulder, 10 feet 6 in. (F. C. Selous).
" " " " 10 feet 4 in. (J. A. Jameson).

Dimensions of Male Elephant killed on Lake Nyassa, 9th September, 1861 (Sir John Kirk, M.D., K.C.B.)

	ft.	in.		ft.	in.
Height at withers	10	3	Horizontal diameter of ear	3	0
Circumference of forefoot	5	1	Perpendicular do.	5	9
From tip of trunk to crown of head	9	0	Semicircumference of belly	9	0
Crown of head to insertion of tail	12	0	Do. of chest	7	10
Length of tail	4	2	Each tusk weighed about 30 lbs.		

Dimensions of Elephant brought from South Africa by H.R.H. the Duke of Saxe-Coburg and Gotha.

	ft.	in.		ft.	in.
Height at withers	10	0	Circumference of head	10	0
From tip of trunk to tip of tail	23	5	From ear to ear	9	0
Girth	16	6	Length of ear	4	6
From top of head to end of trunk	11	3	The skull and tusks weighed more than 3 cwt.; the weight of the whole skin when taken from pickle 20 cwt. 6 lbs.		

The weight of the entire elephant in the flesh was 4 tons 8 cwt. 4 lbs.

Weight of a Baby Elephant, when born, about 213 lbs.

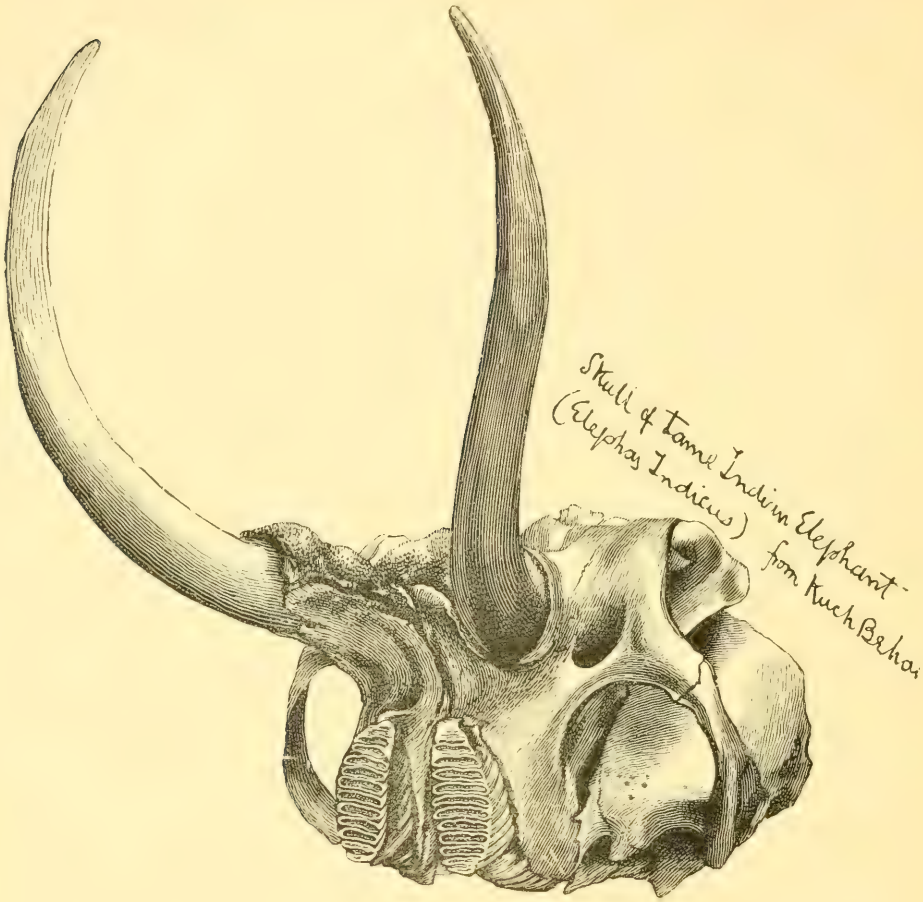
Period of gestation, 629 days.

Height of African ♂ Elephant shoulder to forefoot, perpendicular line, 10 feet 6½ inches (the late Sir Samuel Baker, Bart.)

The celebrated Zoo Elephant "Jumbo" weighed 6½ tons when he left this country, and did not exceed 11 feet at the shoulder.

Dimensions of Male Elephant shot in Somaliland by Capt. G. F. T. Leather.

	ft.	in.		ft.	in.
Height at withers	9	10½	Girth of Belly	16	2
Total length, trunk to end of tail	23	4	Do. Foot	0	53



AFRICAN ELEPHANT TUSKS.

Length (outside curve).		Greatest Circumference.	Weight.	Habitat.	Owner.
ft.	in.	in.	lbs.		
9	5	22½	184	Africa . . .	Sir Edmund G. Loder, Bart.
...		...	172	...	The late Sir Samuel Baker, Bart.
9	4	20½	160	Africa . . .	Sir John Kirk, M.D., K.C.B.
9 (tip broken)	4	18	110	East Africa . .	Duke of Westminster.

AFRICAN ELEPHANT TUSKS—*continued.*

Length (outside curve).		Greatest Circumference.	Weight.	Habitat.	Owner.
ft.	in.	in.	lbs.		
9	0	21	150	South Africa .	Sir Edmund G. Loder, Bart.
8	11	17¼	90	...	H.M. the Queen, Bethnal Green Museum.
8	7½	22¾	160	East Africa . .	H.R.H. Duke of York.
8	3	18¾	81½	Do. . .	T. W. Greenfield.
8	2	18¾	80	Do. . .	Do.
7	8½	23½	160	Africa . . .	Chalmers, Guthrie, and Co.
7	6½	21¼	...	South Africa . .	The late W. C. Oswell.
7	3¼	19½	102	East Africa . .	Capt. F. Lugard.
7	0⅛	17⅛	60 (about)	Kilima'njaro, East Africa	F. J. Jackson.
7	0	18 (about)	...	South Africa . .	Cetywayo's peace offering in 1879 to Lord Chelmsford.
6	9	17¼	...	Kilima'njaro, East Africa	F. J. Jackson.
6	7	16⅛	...	South Africa . .	F. C. Selous.
6 (spiral tusk)	1	7½	...	Masailand . .	Sir John Kirk, M.D., K.C.B.
5	10	16⅛	...	White Nile . .	Sir S. Baker, Bart., British Museum.
5	9	18	70	Nyassaland . .	S. Pulley.
4	11	15	26	Near Webbe Shabayleh	A. H. Straker.
4	9½	14⅜	33½	Somaliland . .	E. W. S. Brooke.
4	5	12½	..	Do. . .	Lord Delamere.
4	5	10	...	East Africa . .	W. Astor Chanler.
4	4	13¾	26	Somaliland . .	Capt. J. M'Call Maxwell.
4	1	12	...	Do. . .	Digby Davies.
2	10	7¾	...	Do. . .	Dr. Donaldson Smith.
Measurements Protruding from Skull.					
−4	8	...	...	Somaliland . .	Capt. M. S. Wellby.
3	5⅞	15⅛	..	South Africa . .	The late J. S. Jameson.
2	10½	11⅝	...	Do. . .	Do.

MAMMOTH ELEPHANT (Elephas primigenius).

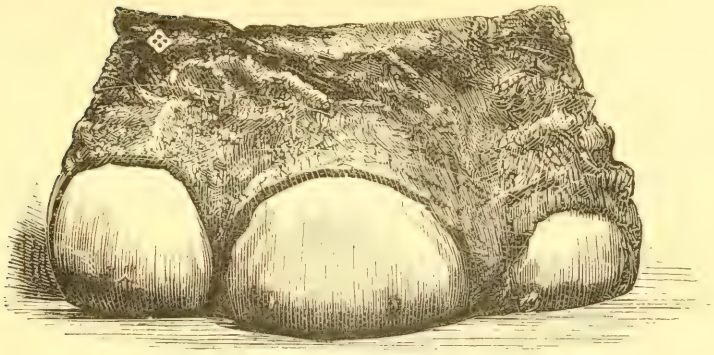
Length (outside curve).	Greatest Circumference.	Weight	Habitat.	Owner.
ft. 11	in. $20\frac{7}{8}$	lbs. 173	Siberia . . .	Sir Edmund G. Loder, Bart.

ASIATIC ELEPHANT TUSKS.

Length (outside curve)		Greatest Circumference.	Weight.	Habitat.	Owner.
ft. 8	in. 0	in. $16\frac{7}{8}$	lbs. 90	South India . .	Sir Victor Brooke's Collection.
7	$3\frac{3}{8}$	$17\frac{1}{2}$	102	The tusks of the sacred white elephant which came out of King Theebaw's palace, Burma. Marquis of Waterford.	
7	$3\frac{1}{4}$	$17\frac{1}{8}$	$97\frac{1}{2}$		
6	10	$17\frac{1}{8}$	$65\frac{1}{2}$	India . . .	J. D. Goldingham, Bethnal Green Museum.
6	0	...	50	Madras . . .	J. Fortune.
-5	10	...	...	Borneo . . .	C. M. D. Stewart.
-5	3	15	42	Ceylon . . .	W. S. Murray.
-5	0	...	...	Burma . . .	T. Mumford.
3	3	18	49	South India (Hassanoor Forest) .	The late Sir Victor Brooke, Bart., and Col. Douglas Hamilton.

MEASUREMENTS PROTRUDING FROM SKULL.

3	11	...	...	India . . .	British Museum.
3	$6\frac{7}{8}$	...	...	Do. . . .	Do.
3	3	...	...	Do. . . .	Do.
2	$5\frac{5}{8}$	15	...	Do. . . .	Do.
1	6	$4\frac{3}{8}$	...	Sumatra . . .	Do.



ASIATIC ELEPHANT FEET.

Circumference at base.	Width at bottom, back to front.	Habitat.	Owner.
-67½	...	Measurements taken from living elephant under charge of Lieut.-Col. G. W. Hanson.	
62½	...	South Arcot District	J. Fortune.
61	20	Travancore	D. M. Lumsden.
-60½	...	India	Major-Gen. Alexander A. A. Kinloch.
58½	18	Travancore	H. L. Cottingham.
57¾	19	Assam	H. C. Holland.
57½	18½	Do.	D. D. F. Hosack.
-56	...	Ceylon	E. J. Brooke.
-56	18	Do.	Sir Peter Walker, Bart.
56	17½	Do.	T. H. Mann.
55½	18½	Madras	Lord Wenlock, G.C.I.E.
55	17¾	Ceylon	Rowland Ward.
55	17	N.W. Provinces	B. B. Osmaston.
55	17	Do.	G. O. Bigge.
54¾	18	Pyinmana Tai	H. Partridge.
53¾	18¼	Ceylon	W. H. Walker.
53½	18	Do.	H. Storey.
52½	17	Do.	H. E. Lindsay.
48½	16	Sumatra	R. P. Carroll.
45½	15½	Mysore	W. G. Deeds.

AFRICAN ELEPHANT FEET.

Circumference at base.	Width at bottom, back to front.	Habitat.	Owner.
60¾	...	Somaliland . . .	Capt. M. S. Wellby.
56	19	Do. . . .	Col. E. Carrington.
54	18½	Do. . . .	Capt. J. S. Ashby.
54	...	Kilima'njaro . .	F. J. Jackson.
53⅞	18½	South Africa . .	The late J. S. Jameson.
53	17	Somaliland . . .	Capt. J. M'Call Maxwell.
52½	19	Do. . . .	Capt. J. S. Ashby.
52½	17	South Africa . .	Rowland Ward.
49¼	16½	East Africa . .	W. Astor Chanler.
48⅞	16⅛	Do. . . .	H. C. V. Hunter.
48	...	Uganda . . .	Capt. F. D. Lugard.
44¾	14¾	Soudan . . .	Col. Ralph Vivian.
44¼	15½	Somaliland . . .	Prince Demeter Ghika.

HIPPOPOTAMUS (**Hippopotamus amphibius**).

The Hippopotamus, although nowadays a good deal scarcer than it used to be in Southern Africa, is still to be found in fair abundance in many of the larger rivers. In the Zambesi, where they are much more difficult to attack than in the smaller rivers of Mashonaland and that region, Hippos are plentiful, as also in the Chobe, Okavango, Cunene, Botletli, and Lake Ngami. A few still linger in the lower reaches of the Orange River, while from Zululand to the Zambesi mouth they are to be found in all the rivers flowing into the Indian Ocean. In many parts of Africa beyond the Zambesi, where, up to the present time, they have been much less persecuted, they are extremely plentiful. The ivory of the Hippopotamus has nothing like the commercial value that it formerly had, when it was in much request for the manufacture of false teeth. The hide, however, is extremely valuable, and is in incessant demand in almost every part of the African continent for the making of raw hide whips. As a sporting animal the Hippo has little to recommend it, and the white hunter, having killed two or three specimens, may be well advised to leave this vast amphibian in peace.

HEIGHT at shoulder about 3 feet 9 inches. WEIGHT about 4 or 5 tons. Adult male measures about 14 feet from snout to tip of tail.

There is a smaller Hippopotamus (*H. liberiensis*) found only in Liberia, West Africa. HEIGHT at shoulder about 30 inches. LENGTH about 6 feet.

Distribution—Rivers and Lakes of Africa.

Length round outside curve of tusks.	Circumference.	Habitat.	Owner.
–51	9 (malformed)	...	J. Lamont.
37½	8¼	Shiré River . .	Comdr. A. T. Hunt, R.N.

HIPPOPOTAMUS (Hippopotamus amphibius)—*continued.*

Length round outside curve of tusks.	Circumference.	Habitat.	Owner.
31¾	10⅜	...	Sir Clement Hill, Bart.
31⅝	9⅛	...	Sir Edmund G. Loder, Bart.
30½	9⅛ *	St. Lucia Bay . .	Hon. Charles Ellis.
30	9	Do. . .	Do.
30	9	Shiré River . .	Surgeon J. Dowson, R.N.
30	9	Zambesi . . .	E. W. Tompson.
29¾	8¾	Do. . . .	F. C. Selous.
29½	8	Do.	Dr. W. P. Y. Bainbrigge.
29	8	Do.	Do.
29	8¼	Shiré River . .	F. V. Kirby.
29	9½	...	Rowland Ward.
27⅛	8	South Africa . .	The late J. S. Jameson.
27⅛	...	Atbara River, North-East Africa	W. D. James.
27	8	East Africa . .	E. Gedge.
19⅞	..	Do. . .	Sir. John Kirk, M.D., K.C.B.

* Weight, 15 lbs. the pair.

MALFORMED TUSK OF INDIAN WILD BOAR.

Killed in the Purneah District, Lower Bengal, in 1854. Illustration and description in *The Field* of 19th January 1895.

Length round outside curve, $14\frac{3}{4}$ inches.

BORNEO WILD BOAR (Sus vittatus).

Distribution—Java, Borneo.

Length outside curve of tusk, $9\frac{3}{4}$ inches. Owner—Dr. Travers.

WILD BOAR (Sus cristatus).

HEIGHT at shoulder about 30 to 40 inches. WEIGHT, 200 to 300 lbs.

Distribution—India and Ceylon.

Length outside curve of tusks.	Habitat.	Owner.
–14¾	Purneah, Lower Bengal	H. R. P. Carter, recorded in *Field*, 19th January 1895 (see illustration).
–14⅜	Hills above Jamu .	Col. Neville Chamberlain.
–10⅝	North Kanara . .	Bombay Natural History Society's Museum.
–10	India . . .	The late Sir Samuel Baker, Bart.
9½	Burma . . .	Langford Whitehouse.
9⅜	Central Provinces .	Capt. J. S. Ashby.
9¼	Do. .	The late J. Moray-Brown.
–8¾	Do. .	Capt. F. D. Lugard.
8½	Do. .	Rowland Ward.
8½	Deroyle, on the Jumna	F. C. Quicke.
8½	Bengal . . .	J. M'Kie.
–8·30	Assam . . .	Baron Edmond de Poncins.
–7·85	Do. . . .	Do.
8	Deroyle, on the Jumna	P. A. Bainbridge.

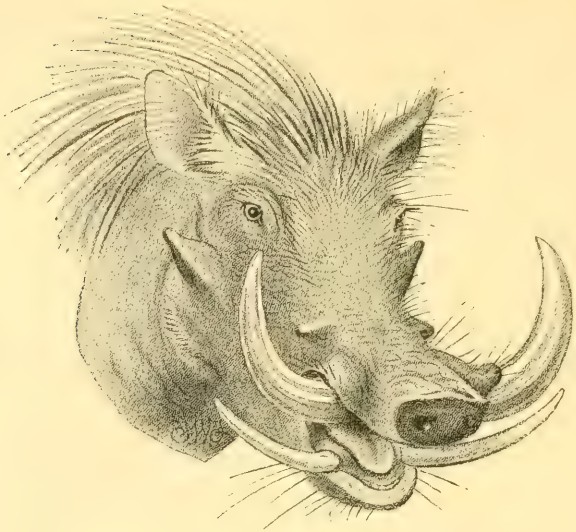
WILD BOAR (Sus scrofa).

HEIGHT at shoulder about 33 inches. WEIGHT of Algerian Boar, clean, 275 lbs. (Baron Edmond de Poncins).

Distribution—Europe, Asia Minor, and North-East Africa.

Length outside curve of tusk.		Length of tusk out of gum.	Habitat.	Owner.
Right.	Left.			
–11½	...	...	Caucasus . .	Col. Veernhof.
–11¼	...	...	Do. . .	Capt. Robert Finnie.
9¾	...	...	Asia Minor . .	Admiral Sir Michael Culme Seymour, Bart.
9	...	...	Albania . . .	Sir Reginald Cathcart, Bart.
–8⅝	...	...	Algeria . . .	Sir Edmund G. Loder, Bart.
–8½*	8⅛	3	Near Bona, Algeria	Baron Edmond de Poncins.
–8½	8½	1⅝	Do.	Do.
–8⅜	8	2¾	Do.	Do.
–8⅜	8⅜	2¾	Do.	Do.
–8	...	...	Albania . . .	Capt. Robert Finnie.
–6¼†	6¼	2½	Near Bona, Algeria	Baron Edmond de Poncins.

* Estimated weight of this boar, 275 lbs. clean. † Height at shoulder, 33⅞. Weight, clean, 161 lbs.



Drawn from a specimen shot in Somaliland by Captain H. G. C. Swayne.

WART HOG (Phacochœrus æthiopicus).

The Wild Boar of Africa has never had the same attention paid to it that its cousin of Hindostan has, since the advent of Europeans, been accustomed to receive. And the Wart Hog, often carrying, though it does, immense tushes, has never been selected, except in Somaliland, as a beast worthy of the honour of the boar-spear. Perhaps its habit of going to ground may have something to do with the matter. The South African hunter, as a rule, troubles very little about the pursuit of the Wart Hog. If an animal with good tushes comes within reach of his rifle, he knocks it over ; but otherwise he is not keen about the wild pig and its ways. It is an undoubted fact that neither of the African wild boars—the Wart Hog and the Bush Pig—exhibit anything like the pluck and determination of their Asiatic or even European cousins. Both are extremely shy, and in daytime seldom venture far from thick covert.

HEIGHT at shoulder, 31 inches, British Central Africa, shot by Dr. Percy Rendall. Outside width in a straight line across tusks, 12$\frac{1}{4}$ inches.

Distribution—Throughout Africa in suitable localities.

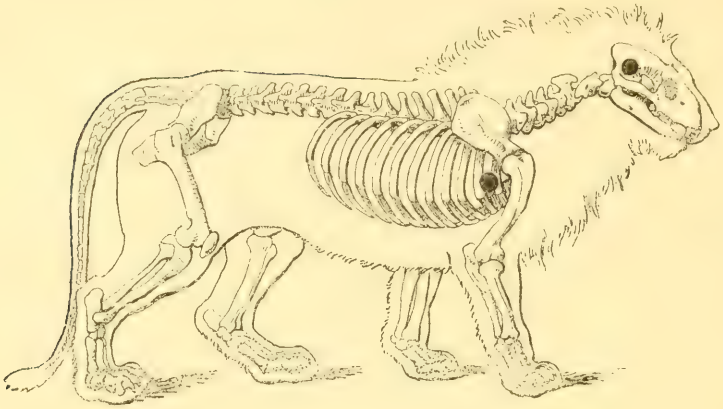
WART HOG (Phacochœrus æthiopicus)—*continued.*

Length outside curve.	Length exposed from gum.	Habitat.	Owner.
–27 / 26	...	Annesley Bay, near Amphall	Capt. Ralph Berners, R.N.
–16¼	..	..	J. Whitaker.
15	...	South-East Africa	Russell Bowker.
14¾	.	British Central Africa	James Yule.
...	13¾	Zambesi	R. J. Cuninghame.
–13	...	Timpabte River, S.E. Africa	W. R. Bowker.
...	13	South-East Africa	F. C. Selous.
–12	...	Do.	James Meldrum.
–11	...	East Africa	Count Felice Scheibler.
–...	10⅝	Sabi Flats, Transvaal	Dr. Percy Rendall.
10½	...	Somaliland	W. R. Bindloss.
10⅛	...	South-East Africa	F. V. Kirby.
...	9	Somaliland	Prince Boris Czetwertynski.

RED RIVER HOG (Sus porcus).

Shot on Shiré River, British Central Africa, by Dr. Percy Rendall.

HEIGHT at shoulder, 23¼. WEIGHT, 35 lbs.



LION (Felis leo).

Somali Name—"Libbah." *Abyssinian Name*—"Asced."
Swahili Name—"Simba." *Chinyanja Name*—"Mkango."

Col. Arthur Paget estimated the weight of one of his fine Lions, shot in Somaliland, at about 550 lbs.

HEIGHT at shoulder, (S. Africa) 3 feet 8 inches (F. C. Selous).
" " 3 feet $4\frac{1}{2}$ inches (Dr. Percy Rendall).
" " (India) 3 feet 6 inches (Gen. W. Rice).

Distribution—Kathiawar District of India (nearly extinct) and throughout Africa.

LION (Felis leo).

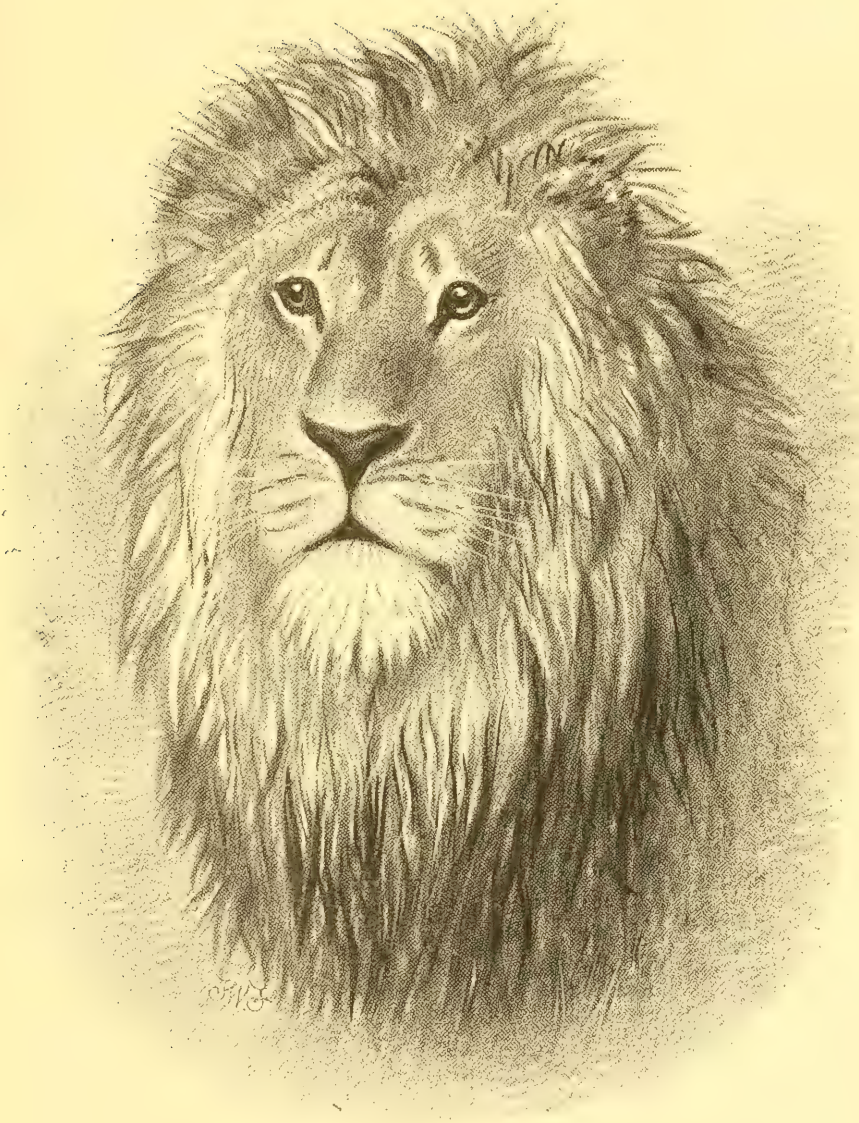
Total length before skinning.	Length from nose to root of tail.	Skin measurement from tip of nose to tip of tail.	Height at shoulder.	Girth of forearm.	Girth behind shoulder.	Weight.	Description.	Habitat.	Owner.
ft. in.	ft. in.	ft. in.	ft. in.	in.	in.	lbs.			
–10 7	...	...	...	...	...	...	Fine mane .	Somaliland .	Lord Wolverton.
–10 5 (A)	...	10 10½ (raw)	3 7	19	...	...	Full black mane	S.E. Africa .	F. V. Kirby.
–10 0	6 10	...	3 6	22 upper arm	57	434	Fine mane .	Edmund's Menagerie	W. Yellowby.
–9 11 (C)	...	11 9 (raw)	3 8	...	...	410	...	Hartley Hills, Mashonaland	F. C. Selous.
–9 10½ (D)	6 8	10 8 (dressed)	3 6	19½	51½	516	Fine mane .	Brit. East Africa	Capt. R. A. J. Montgomerie, C.B., R.N.
–9 10	...	...	...	...	...	...	Fair mane .	Mashonaland .	Sir John Willoughby, Bart.
–9 10 (E)	...	...	...	...	...	...	Do. .	Limpopo . .	T. E. Buckley.
–9 10 (H)	...	12 1¼ (raw)	3 7	...	49⅛	...	Full black .	Mushukulumbwe	Capt. A. St. H. Gibbons.
–9 8	3 1½ (tail)	...	3 4½	15¼	...	...	Full yellow mane	Zomba, S.E. Africa	R. G. Beswick.
–9 7	...	...	...	...	...	.	Do.	Kathiawar, India	Lord Harris.
–♀9 6	...	...	...	...	...	...	...	Somaliland .	Capt. A. E. Sandbach.
–♀9 5	6 6	...	...	...	...	...	Fine lioness .	Do. .	Lieut.-Col. L. L. Fenton.
–9 3	6 6	...	3 11	16	45	...	Well maned, partially black	Kathiawar, India	Count Felice Scheibler.
–9 2 (F)	...	10 0 (dressed)	...	...	48	...	Black mane .	Somaliland .	Capt. T. R. Harkness.
–♀9 2	...	...	...	..	...	...	...	Do. .	Lord Delamere.
–9 1	...	11 0 (raw)	3 4	17	48½	...	...	Pungwe District, S.E. Africa	F. C. Selous.
–9 1	6 1	...	3 6½	15	44	...	Light colour mane	Somaliland .	Count Felice Scheibler.
–9 1 (G)	...	10 4 (dressed)	...	...	...	...	Fine black mane	Do. .	Capt. G. Campbell.
–9 1	...	10 4 (dressed)	...	...	...	...	Good mane .	Do. .	Lord Delamere.
–8 9½	...	...	...	...	...	490	Lion . .	Central India .	Capt. Smee.
–♀8 7½	...	9 2 (raw)	3 3	...	...	...	...	...	F. V. Kirby.
–♀8 6	...	9 7 (dressed)	...	...	...	...	Old lioness .	Brit. East Africa	Capt. R. A. J. Montgomerie, C.B., R.N.

For skull measurements of the specimen above indicated under (A), (C), (D), (E), (F), (G), (H), see pages 310, 311.

LION SKINS.

Length from tip of nose to end of tail dressed.		Description.	Habitat.	Owner.
ft.	in.			
11 (raw)	4½	Fine black mane .	Lo Magondi's Country	G. Seymour-Fort.
11	4	Fair do. .	East Africa . .	J. Gardiner-Muir.
11	2 (B)	Good mane . .	Do. . .	E. Gedge.
11	0	Do. . .	Athi Plains . .	S. Vandeleur.
11	0	Good tawny mane .	Somaliland . .	Lord Delamere.
11	0	Do. .	Do. . .	C. N. Welsh.
10	10	Fine black mane .	Do. . .	Surgeon-Major Flanagan.
10	10	Do. .	Do. . .	E. Lee-Townshend.
10	10	Do. .	Do. . .	Rowland Ward.
10	10	Do. .	Do. .	Ford G. Barclay.
10	10	Do. .	Do. . .	Major H. C. Morland.
10	7	Do. .	Do. . .	Prince Nicolas Ghika.
10	6	Do. .	Do. . .	Col. A. Paget.
10	4½	Fair mane . .	Do. . .	Lord Wolverton.
10	2½	Fine mane . .	Do. . .	Capt. Frank Lee.
10 (raw)	2	Do. . .	East Africa . .	H. Charrington.
10	0	Do. . .	Somaliland . .	Hon. W. W. Ashley.
♀ 9	5	Lioness . .	Do. . .	Capt. J. M'Call Maxwell.
♂ 9	2	Do. . .	Do. . .	Major C. F. Blane.
♀ 9	1	Do. . .	Do. . .	Do.

(B) See skulls, page 310.



AFRICAN LION.

LION SKULLS (Felis leo).

Basil length from back to front.	Width across the zygomatic arches.	Weight cleaned.	Habitat.	Owner.
16½ (A)	10	...	South-East Africa	F. V. Kirby.
16 (B) (end broken)	10¼	5 lb.	East Africa . .	E. Gedge.
–15⅞	9¾	6 lb.	South Africa .	J. Lamont.
15½ (D)	10½	5 lbs. 3 oz.	East Africa . .	Capt. R. A. J. Montgomerie, C.B., R.N.
15½	9¼	...	Pungwe District .	Hon. T. Thynne.
–15¼ (H)	9¾	.	Mushukulumbwe .	Capt. A. St. H. Gibbons.
15	10		Mashonaland .	Basil H. Woodd.
–15	10	..	Somaliland . .	J. D. Inverarity.
15	10	.	Benguella . .	G. W. Penrice.
15	9½	...	Beira . .	H. and T. Glynn.
15	9½	...	Athi Plains . .	S. Vandeleur.
15	10	...	Somaliland . .	Col. A. Paget.
15 (C)	10	5½ lbs.	South-East Africa	F. C. Selous.
14½	9¾	4 lbs.	South Africa .	Sir Edmund G. Loder, Bart.
–14⅜	9⅛	...	Limpopo . .	T. E. Buckley.
14¼ (G)	9¾	...	Somaliland . .	Capt. G. Campbell.
–14¼	8¼	3½ lbs. clean	Lake Nyassa .	Dr. Percy Rendall.
14¼	9¾	...	Somaliland . .	Surgeon-Major Flanagan.
–14¼	9¼	...	Do. . .	A. E. Leatham.
♀ 14⅛	8¾	...	South Africa .	F. V. Kirby.
14	10	...	Somaliland . .	Capt. C. J. Melliss.
–14	9⅝	...	Do. . .	H. W. Seton-Karr.
14	9½	...	Do. . .	Lord Delamere.
13¾	9½	.	Do. . .	Lord Wolverton.
13¾	9¼	..	Do. . .	E. W. S. Brooke.
–13¾	9¼	...	Somaliland . .	C. V. A. Peel.
13¼	8⅛	...	Mashonaland .	Sir John Willoughby, Bart.
13¼ (E)	9	...	Kathiawar, India .	Lord Harris.

LION SKULLS (Felis leo)—*continued.*

Basil length from back to front.	Width across the zygomatic arches.	Weight cleaned.	Habitat.	Owner.
13 (F)	$8\frac{3}{4}$	...	Somaliland . .	Capt. T. R. Harkness.
–13	9·4	...	India . . .	W. T. Blanford.
– ♀ $12\frac{1}{8}$	$7\frac{15}{16}$	2 lbs. 13 oz.	East Africa . .	Capt. R. A. J. Montgomerie, C.B., R.N.
– ♀ 11	$7\frac{1}{2}$	...	Somaliland . .	J. D. Inverarity.

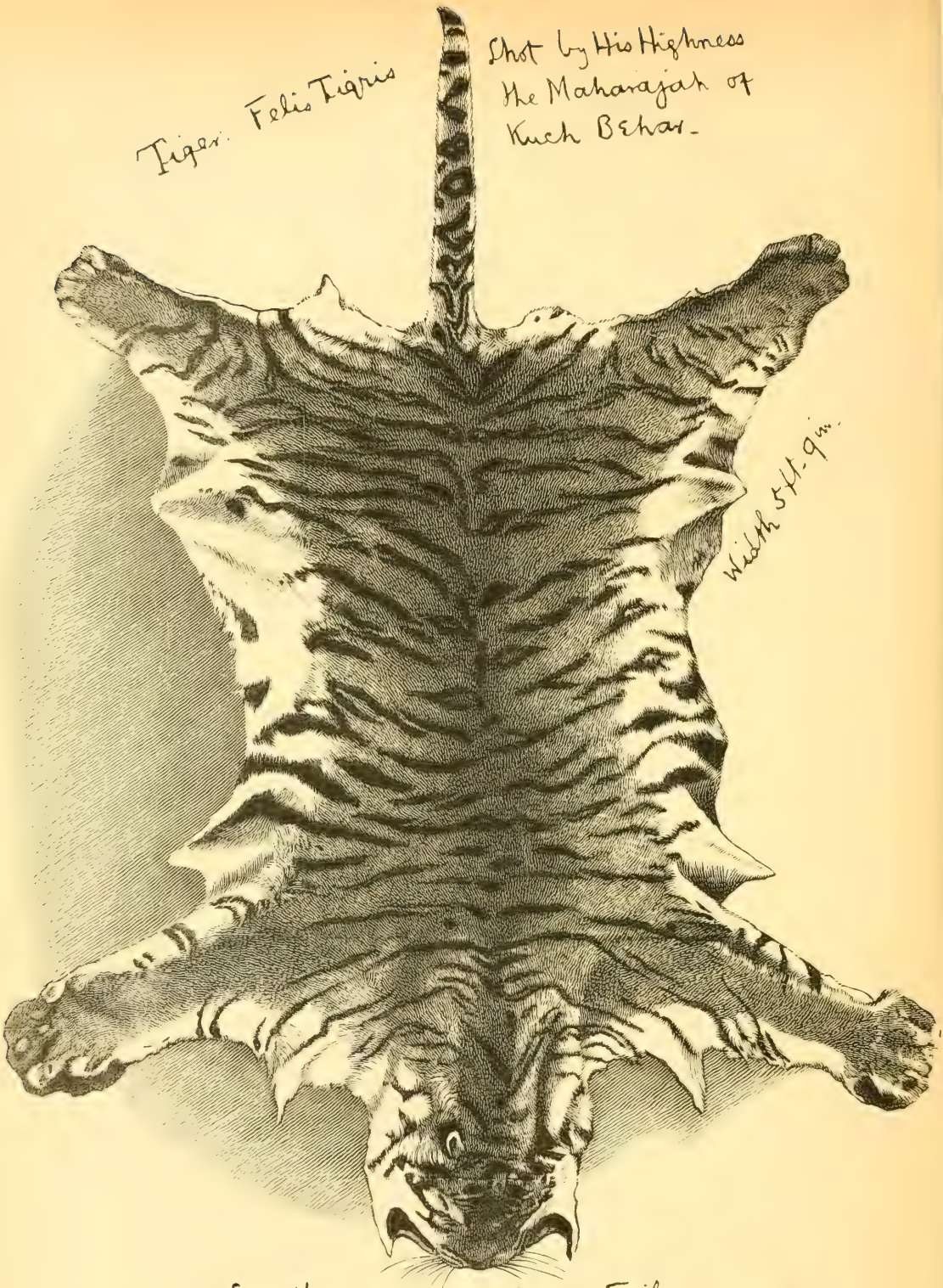
The measurement of the skins belonging to skulls indicated under (A), (B), (C), (D), (E), (F), (G), will be found at pages 307, 308.

TIGER SKINS.

Distribution—Eastern Asia.

Length of skin.			Habitat.	Owner.
ft.	in.			
13	6	(dressed)	Chinese Mongolia . .	A. Bignold.
12	5 (A)	,,	Aghat Reserve Forest, Duars	Mrs. Lawrie-Johnstone.
12	4	(raw)	Kuch Behar . .	His Highness the Maharajah of Kuch Behar.
11	$11\frac{1}{2}$	(dressed)	India . . .	H. W. Gibson.
11	10	,,	Kuch Behar . .	Hugh Fraser.
11 (white tiger)	$9\frac{1}{2}$	,,	Puna	Major D. Robinson.
11	8	,,	Central Provinces . .	Capt. E. A. D'Arcy Thomas.
11	7	,,	Do. . .	H.R.H. le Duc d'Orleans.
11	6	,,	Do. .	Lord Delamere.
11	$3\frac{1}{2}$	,,	China . . .	W. H. Walker.
11	$1\frac{1}{2}$	,,	Central Provinces . .	Surgeon-Major M. O'C. Drury.
11	1	,,	N.W. Provinces . .	J. Macpherson.
11	1	,,	Do. . .	W. H. Cobb.
10	6	(raw)	Do. . .	P. H. Clutterbuck.

(A) See under skulls, page 314.



Length from nose to tip of Tail
before skinning 10 ft 1½ in
dried skin 11 – 7 –

TIGERS (Felis tigris).

Indian names—"Bágh," "Shér."

Length before skinned.	Length of body.	Length dressed.	Girth, body.	Girth. Upper arm.	Girth. Forearm.	Girth. Head.	Height at shoulder.	Weight.	Habitat.	Owner.
ft. in.	ft. in.	ft. in.	ft. in.	in.	in.	in.	ft. in.	lbs.		
–10 6	...	11 8	...	...	...	...	...	...	Assam Frontier .	H.I.M. the Sultan of Turkey. (Shot by the late Baron de Nolde.)
–10 3	7 1½	...	52	29	19½	36½	3 4½	487	Kuch Behar .	His Highness the Maharajah of Kuch Behar.
–10 2½	7	...	48½	26½	20	38½	3 3½	530	Do. . .	Do.
–10 2½	...	...	...	...	...	...	...	...	Nepal, Terai .	Sir E. L. Durand, Bart., C.B.
–10 2	...	...	...	...	...	...	...	...	Do. . .	Otho Shaw.
–10 1½	7 1½	11 7	54	29	21	40½	3 8¾	...	Kuch Behar .	His Highness the Maharajah of Kuch Behar.
–10 1	...	11 10	...	...	...	...	...	...	Do. . .	Hugh Fraser.
–10	6 11	...	52	26	24	36	3 4	540	Do. . .	His Highness the Maharajah of Kuch Behar.
–10	...	...	...	...	...	...	...	...	Nilghiri Hills .	Sir Edmund G. Loder, Bart.
–9 11	...	11 1½	...	...	...	...	...	...	Nepal . .	A. E. Leatham.
–9 8	...	...	...	...	...	...	...	...	North Kanara .	Lieut-Col. L. L. Fenton.
–9 8	...	...	...	...	...	...	...	...	Terai . . .	Major B. D. Möller.
–9 7	...	11 4	...	...	...	...	...	437	...	The late Sir Samuel Baker, Bart.
–9 5	...	...			...	...		...	...	J. D. Inverarity.
–9 5	...	10 4½	...	...	...	...	...	420	Kuch Behar .	Count Felice Scheibler.
–9 4	...	11 6	...	...	...	...	...	418	Do. . .	Hugh Fraser.
–♀9 3	6 3	...	41	22	16	36	2 10	360	Do. . .	His Highness the Maharajah of Kuch Behar.
–♀9 2	...	...	...	...	...	...	...	...	Nepal . .	A. E. Leatham.
♀9	...	...	...	...	...	...	...	...	North Kanara .	Lieut-Col. L. L. Fenton.
–♀8 8	...	...	...	...	...	...	...	...	Gwalior . .	Baron Edmond de Poncins.
–♀8 5½	...	9 10	...	...	...	...	...	315	Bignor District .	Surgeon Capt. E. M'ck Williams.

Shot by His Highness the Maharajah of Kuch Behar.

TIGER SKULLS.

Basal length from back to front.	Breadth across the zygomatic arches.	Weight cleaned.	Habitat.	Owner.
		lbs. oz.		
-15¾	...	...	Kuch Behar .	Maharajah of Kuch Behar.
-15¼	10⅞	...	N.E. Bengal .	A. M. Murdoch.
-15¼	10½	...	Purneah . .	R. A. Sterndale.
-14½	10	...	Terai . . .	Bombay Natural History Society's Museum.
14½	10⅛	...	Central Provinces	Capt. W. H. Hunter.
14¼	10⅜	...	Do. . .	Capt. E. A. D'Arcy Thomas.
-14	10	...	...	J. D. Inverarity.
13¾	9¼	...	Indhaorèe .	Lieut-Col. H. Wade Dalton.
-13¾	9¼	...	North Kanara .	Lieut-Col. L. L. Fenton.
13·70(A)	9	...	Duars . . .	Mrs. Lawrie-Johnstone.
13½	9½	3 14	India . . .	Major J. W. M. Cotton.

(A) See under skins, page 311.

THE OUNCE or SNOW LEOPARD (Felis uncia).

HEIGHT at shoulder about 28 inches.

Distribution—High Central Asia, especially Tibet, extending north to the Altai, and west, it is said, into Persia (W. T. Blanford).

Length dressed.		Weight.	Habitat.	Owner.
ft.	in.			
8	7	...	Tibet . .	Rowland Ward.
8	2½	...	Baltistan .	E. Langworthy.
–7	5¾	...	Pamir . .	Baron Edmond de Poncins.
7	5	...	...	Major F. J. Harden.
–7	4	(24 inches high at shoulder)		R. A. Sterndale.
–6	4	...	...	Major A. E. Ward.

SKULL.

Basal length from back to front.	Breadth.	Habitat.	Owner.
–6	4·75	India . .	W. T. Blanford.

THE CLOUDED LEOPARD (Felis nebulosa).

HEIGHT at shoulder, 14½ inches. WEIGHT, 44½ lbs. (Blanford).

Distribution—South Eastern Himalayas, Sikim, Bhutan, Assam, Burma, Siam and Malay Peninsula, Sumatra, Java, Borneo (W. T. Blanford).

Length dressed.		Weight.	Habitat.	Owner.
ft.	in.	lbs.		
6	6	...	Assam . .	B. H. Hodgson.
6	4	...	...	R. A. Sterndale.
5	7½	44½	Assam . .	B. H. Hodgson.
5	7½	...	Do. . .	P. Russel.

SKULL.

Basal length from back to front.	Breadth.	Habitat.	Owner.
6·2	4·75	Assam . .	B. H. Hodgson.

INDIAN LEOPARD (Felis pardus).

Indian name—"Nakorebágh."

HEIGHT at shoulder about 2 feet.

Fine male shot in Gir Forest, Kathiawar, by Lieut.-Col. L. L. Fenton.

LENGTH, 7 feet $8\frac{1}{2}$ inches; length of tail, $35\frac{1}{2}$ inches. WEIGHT, 160 lbs. Skull measurements, $10\frac{3}{16} \times 6\frac{1}{4}$ (see page 317).

Girth of neck, $21\frac{1}{2}$ inches.
" forearm, $11\frac{1}{2}$ "
" of body behind foreshoulder, $35\frac{1}{2}$ inches.

Length before skinned.	Total length dressed.	Weight.	Habitat.	Owner.
ft. in.	ft. in.	lbs.		
–...	8 2	...	India . .	C. V. A. Peel.
–♂7 4	8 1	145	Bignor District	Surgeon-Capt. E. M'ck Williams.
...	♂7 10	...	...	Col. Gordon Cumming.
–6 10	7 10	140	Bignor District	Surgeon-Capt. E. M'ck Williams.
...	7 $8\frac{1}{2}$	...	Kuch Behar .	H.H. the Maharajah of Kuch Behar.
–...	♂7 8	...	Do. .	Do.
...	♂7 8	...	...	Capt. A. G. Ferguson.
...	7 $6\frac{1}{2}$	140	Kuch Behar .	H.H. the Maharajah of Kuch Behar.
–...	♂7 $4\frac{1}{2}$	...	...	Col. Howard.
–...	♂7 4	...	Nepal . .	Major H. L. Heber-Percy.
–...	♂7 1	...	Do. . .	Sir E. L. Durand, Bart., C.B.
–...	6 8	110	Madras . .	M. Loam.
–...	6 5	...	Gwalior . .	Baron Edmond de Poncins.
–♀5 10	6 $8\frac{1}{2}$	96	Bignor District	Surgeon-Capt. E. M'ck Williams.
–♀5 8	6 4	80	Do.	Do.

Black variety, shot in North Kanara, Kathiawar—LENGTH, 6 feet $5\frac{1}{2}$ inches (Lieut.-Col. L. L. Fenton).

Leopard shot in Ceylon by Count Felice Scheibler.

	Leopard (male).		Leopard (female).	
	ft.	in.	ft.	in.
Length from tip of nose to end of tail	7	0	6	4
,, ,, root of tail	4	$3\frac{1}{2}$	3	7
Height at shoulder	2	$2\frac{1}{2}$	1	9
Girth	2	7	2	1
Circumference of upper arm	0	13	0	10
,, forearm	0	$10\frac{3}{4}$	0	$8\frac{1}{2}$

AFRICAN LEOPARD (Felis pardus).

Swahili name—"Chui." *Chinyanja name*—"Nyacogwi." *Somali name*—"Shabal.

HEIGHT at shoulder about 2 feet 4 inches (F. V. Kirby).

Two shot by Count Felice Scheibler, Somaliland, measured.

	Leopard (male).		Leopard (female).	
	ft.	in.	ft.	in.
Length from tip of nose to end of tail	7	2	6	10
,, ,, root ,,	...		4	1
Height at shoulder	...		2	0
Girth	...		2	5
Circumference of upper arm	...		0	11
,, forearm	...		0	10

Length.		Weight.	Habitat.	Owner.
ft.	in.	lbs.		
7	2	...	South-East Africa	F. V. Kirby.
6	10	140	Nyassaland	A. White.

LEOPARD SKULLS.

Total length.	Width.	Weight.	Habitat.	Owner.
in.	in.	lbs.		
$-10\frac{3}{16}$	$6\frac{1}{4}$	...	Gir Forest, Kathiawar	Lieut.-Col. L. L. Fenton.
$-9\frac{13}{16}$	$\frac{6}{16}$	1 lb. 5 oz. clean.	Lake Nyassa	Dr. Percy Rendall.
-9	$5\frac{1}{4}$	...	S.E. Africa	F. V. Kirby.
$-6\frac{7}{8}$	5	...	India	W. T. Blanford.

INDIAN HUNTING LEOPARD (Felis jubata).

LENGTH, 7 feet. HEIGHT at shoulder, 30 to 39 inches (R. A. Sterndale).

LENGTH, 6 feet $\frac{1}{4}$ inch; length of tail, 2 feet $2\frac{1}{4}$ inches; speared near Rajkot, Kathiawar (Lieut.-Col. L. L. Fenton).

JAGUAR (Felis onca).

Distribution—South America.

Length before skinning.	Length dressed.	Habitat.	Owner.
ft. in.	ft. in.		
9 3	9 3	Brazil . . .	Count Henry Coudenhove.
8 $3\frac{3}{4}$	...	Do. . . .	Do.

TIBET LYNX (Felis isabella).

HEIGHT at shoulder about 16 to 18 inches.

THE COUGAR or AMERICAN PUMA (Felis concolor).

WEIGHT about 150 lbs. HEIGHT at shoulder, 2 feet.

Length.	Weight.	Habitat.	Owner.
ft. in.	lbs.		
8 6	150	...	Pendarves Vivian.
7 $8\frac{1}{2}$	...	...	Rowland Ward.
7 $6\frac{5}{8}$	...	Brazil . . .	Count Henry Coudenhove.
7 3*	...	Fraser River, British Columbia.	Mr. Fannin.

* Recorded by Clive Phillipps Wolley.

HYÆNA SKULLS (H. crocuta).

Length.	Width.	Weight.	Habitat.	Owner.
in.	in.	lbs. oz.		
–$12\frac{1}{4}$	$7\frac{1}{4}$	...	South-East Africa .	F. V. Kirby.
–11	$6\frac{7}{8}$	...	Do. . .	Do.
–$10\frac{5}{8}$	$6\frac{7}{8}$	2 3	East Africa . .	Capt. R. A. J. Montgomerie, C.B., R.N.

BEAR SKINS.

Length from nose to tip of tail.	Height at shoulder.	Girth.	Weight.	Species.	Habitat.	Owner.
ft. in.	ft. in.	ft. in.	lbs.			
–13 6	...	...	1656	Grizzly .	English Bay, Kodak Island, Alaska	J. C. Tolman.
9 10 *	.	.	...	Do. .	Alaska . .	Rowland Ward.
9 10 *	...	...	..	Do. .	Do. . .	W. Fox.
9 8 *	. .	. .	...	.	Do. . .	Cape Town Museum.
9 5 *	..	...	...		Do. . .	Dublin Museum.
9 5 *	...	...	.	..	Do. . .	Hon. Walter Rothschild.
8 10	4 0 (mounted)		...	.	Do. . .	British Museum.
8 7	...		1600	Polar .	Arctic Seas .	Capt. Lyon.
8 6	...	.	...	Do. .	Do. .	Dr. S. H. T. Armitage.
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8 0	3 11	..	...	Do. .	British Columbia	Sir Peter Walker, Bart.
8 0	. .	.	735	Do. .	New Mexico .	Montague Stevens.
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–6 10	3 0	4 4½ (forearm 25 in.)	423	Sloth Bear	Kuch Behar .	H.H. the Maharajah of Kuch Behar.
–6 4½	...	...	...	Red Bear	...	Lieut. H. M. Biddulph.
–6 1	...		...	Sloth .	...	Capt. B. H. Boucher.
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–5 5½	.	...	216	Do. .	...	Do.
–5 5	2 5¾	2 10¾	about 250	Black .	British Columbia	Count Felice Scheibler.
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5 1½	...	...	,, 200	Brown .	Wyoming .	Do.
–5 1·65	.		...	Red .	Kandgood .	Baron Edmond de Poncins.
–4 9·65	.	.	.	Black .	Oveypore .	Do.

* Measurements of raw skins.

BEAR SKULLS.

Basal length from back to front.	Width across the zygomatic arches.	Weight cleaned.	Species.	Habitat.	Owner.
in.	in.	lbs. oz.			
$18\frac{3}{4}$	$11\frac{3}{8}$	12 0	Cave bear	...	Sir Edmund G. Loder, Bart.
18	11	10 0	*Ursus Beringianus*	Siberia . .	Hon. Walter Rothschild.
$-16\frac{1}{2}$	...	...	...	Alaska . .	H. W. Seton-Karr.
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$15\frac{1}{8}$	$10\frac{1}{2}$	5 13	Polar .	Polar Seas .	Sir Edmund G. Loder, Bart.
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$15\frac{3}{8}$	$9\frac{1}{4}$	4 10	Do. .	Kamschatka .	Lieut. R. E. R. Benson, R.N.
$14\frac{1}{2}$	9	5 14	Polar .	Franz Joseph Land	Jackson-Harmsworth Expedition.
$14\frac{1}{2}$	$8\frac{1}{4}$	4 8	Grizzly .	British Columbia	S. B. Bennett.
$14\frac{3}{8}$	$8\frac{1}{4}$	5 0	Do. .	New Mexico .	Montague Stevens.
13	$9\frac{1}{8}$	...	Polar .	Spitzbergen .	The late Capt. Townley Parker.
$12\frac{1}{2}$	$6\frac{3}{4}$	...	Sloth .	Cent. Prov. .	Surgeon-Major M. O'C. Drury.
$11\frac{3}{4}$	$7\frac{1}{2}$	...	Red .	Kashmir .	W. R. Bindloss.
-10	6·8	...	Black .	Nepal . .	W. T. Blanford.
-8·5	8·3	...	Malayan .	Borneo . .	Do.

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